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B O S T O N   U N I V E R S I T Y  
G R A D U A T E   S C H O O L

Thesis

INDUSTRIES OF VENEZUELA, WITH  
EMPHASIS ON PETROLEUM

by

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## Introduction

Petroleum is of prime importance when considering the economic development of Venezuela. In past years, it received much attention from the Venezuelan government. Sympathetic legislation was enacted to foster its growth. Other industries such as agriculture, cattle, manufacturing were relegated to minor roles as the government focused all her attention upon this one industry. Production grew and revenues increased. Venezuela was soon leaning heavily upon the revenue derived from taxes and royalties on oil to pay for the programs and functions of government. In recent years, it has occurred to Venezuelan officials that other industries have been ignored, that the country has fine capacities for producing other goods, that a day may come when the now abundant oil may give out. With the latter thoughts in mind, Venezuela is utilizing the revenues from petroleum to build up her other industries.

It is the purpose of this paper to give the past development, present status, and future possibilities of the industries of Venezuela. To facilitate doing the above, there will be found statistical data concerning size, production, etc., of all her industries. Obstacles and aids to development are given along with the policies and plans





of the national government. Throughout, as might be expected, there are references as to the influences of the petroleum industry. Finally, there will be found a brief exposition as to the future possibilities of the industries of Venezuela.



## Chapter I

### General Description of Venezuela

#### Geography and Topography

The United States of Venezuela occupies part of the northern-most part of the South American Continent. It faces the Caribbean Sea to the north and is bounded on the east by British Guiana and Brazil, on the south by Brazil and Columbia, and on the west by Columbia. Extending about 900 miles from east to west and nearly 800 miles from north to south at its widest point, the country has an approximate area of 352,143 square miles. The Confederation consists of the Federal District, 20 states, and 2 territories.

In general, Venezuela may be divided into four physiographic regions. The mountainous region, part of the Andean highland, extends from the Columbian border northeast to the Caribbean Sea and thence eastward along the coast. The Maracaibo region lies between the two ranges of the Venezuelan Andes and comprises Lake Maracaibo and the surrounding lowlands. The Orinoco lowlands, or llanos, are a region of grassy plains, largely unexplored, stretching more than 600 miles from east to west across the central part of the country. They cover about 130,000 square miles, a third of the total area of the country. The Guiana highlands, lying south and east of the Orinoco system, consist





of plateaus and generally low mountains, varied by open areas and forests. This region, also, is largely unexplored.

### Climate

The climate is affected more by the altitude than by the latitude. Although Venezuela lies entirely within the Tropics, there are three general climactic zones - hot, temperate, and cold.

The hot zone ranges from sea level to an elevation of about 2,000 feet and extends along the coastal plains and into the interior plains and valleys. Mean annual temperatures vary between 74° and 91°F. The heat of the coastal plain is tempered by trade winds. Extensive llanos lying within this area are annually in flood during the rainy season, which lasts from April to December.

Temperate zones lie between 2000 and 7000 feet above sea level. Here the climate is healthful and invigorating, with mean annual temperatures ranging from 50° to 77°F. Most of the cities are located in the highlands of the western and northern parts of the country.

Above an altitude of 7000 feet the climate is cold and damp. In this zone, mean temperatures fall from 60° to zero. A line of perpetual snow exists at about 14,000 feet.



### Census Enumerations

National population censuses have been taken at irregular intervals in Venezuela. The last comprehensive enumeration was made in 1941, and earlier censuses were taken in 1881, 1891, 1920, 1926, and 1936. Reports for the later years provide a wealth of information on civil status, sex, and vital statistics, but there is very little information on employment and occupation. The total population of Venezuela in 1926 was 3,026,878; in 1941 it was 3,951,371; and the estimate for 1943 was 4,004,719.<sup>1</sup>

The admixture of Spanish and native elements is so widespread among the Venezuelan people that pure Caucasians represent a small part of the population. People of European extraction constitute about one-fifth of the total. Whites, as recognized in Venezuela, usually show strains of Negro and Indian blood in varying degrees. Negro blood predominates in the coastal region, and the Spanish and Indian admixture, in the higher altitudes and in the cities of the interior. In 1936 mestizos comprised about 50 per cent of the total population; Negroes and mulattoes, 25 per cent; white, 15 per cent; and Indians, 10 per cent.<sup>2</sup>

Areas of greatest population density are the Andean

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1. International Reference Service, Venezuela, p. 2.  
2. Ibid. p. 3.



and coastal highlands. Approximately three-fourths of the people are rural and engage in agricultural and pastoral pursuits. During the war years, however, there was a marked movement of rural people toward the oil fields and cities. About half the population of the interior of the Federal District migrated to Caracas, the capital.

### Education

Venezuela initiated revolutionary changes in its educational system in 1936 with a program to stamp out illiteracy. Educational facilities are now centralized under the Federal government, with administrative control in the Ministerio de Education Nacional. Primary education, both rural and urban, has made great progress. Rural missions move from place to place in the various states in an effort to combat the widespread illiteracy. Elementary education is free and from the age of 7 to completion of the primary grades, is compulsory. In 1941, there were 4,888 primary schools maintained by federal, state, and municipal authorities, with 7,056 instructors and 264,938 pupils.<sup>3</sup>

Venezuela has two universities: Universidad Central (Central University) in Caracas, and Universidad de Low Andes (University of the Andes) at Merida. Specialized institutions also occupy an important place in Venezuela's educational

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3. Ibid.





system. Prominent among these are the Instituto de Geologia (Institute of Geology), Instituto de Medicina Experimental (Institute of Experimental Medicine), and Instituto de Cirugia Experimental (Institute of Experimental Surgery). Schools for commercial and industrial education and schools of arts and crafts also fall into this group.

### The Venezuelan Economy

From the standpoint of international trade, the production of petroleum is the most important economic activity in Venezuela. No other country of Latin America, except El Salvador, is dependent upon the export of a single commodity to the same extent as is Venezuela. In recent years about nine-tenths of all Venezuelan exports, in terms of value, have consisted of petroleum and its derivatives. Practically the entire production is by foreign-controlled companies operating under government concession. Other minerals occurring in the country include gold, silver, copper, magnesite, coal, iron, tin, asphalt, asbestos, mica, and salt. The country's iron reserves are potentially important, but have not been exploited to any considerable extent. Venezuela also is believed to have extensive reserves of coal; in general, however, this field is inaccessible and has not been developed.

Coffee is the leading Venezuelan agricultural export commodity; cacao ranks second. Other agricultural products,





grown chiefly for consumption within the country include, corn, sugar, cotton, tobacco, wheat, rice, beans, potatoes, fruits, and a wide variety of vegetables. In recent years the government has attempted to stimulate agriculture and agricultural exports by aids of various kinds to the agriculturalists and by export bounties on agricultural products.

Pastoral activities, especially the cattle industry, form a significant source of national wealth. Cattle hides are an important export product; the beef is consumed largely within the country. Sheep, goats, hogs, and horses are also raised, and goatskins are exported.

The extensive forest resources of Venezuela include at least 600 species of wood. About two-fifths of the country's land area is forested, but there has been no extensive development of lumbering. The chief forest products are cabinet woods, rubber, balata, the tonka bean (a seed used for flavoring), divi-divi (a substance used in dyeing and tanning), copaiba (a resinous substance used for medicinal purposes), and vanilla.<sup>4</sup>

Venezuelan manufacturing industries are not extensive, although in recent years there has been a considerable development in certain lines, and for some products the entire domestic requirements are produced within the country. High

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4. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 2.



duties are imposed on imported manufacturers, but domestic production on the whole is so small that there is little competition with imported commodities in most lines. Through the tariff and through loans, the government encourages the establishment of small industries, especially those which utilize domestic raw materials. Manufactured goods produced within the country include cotton textiles, soap, cigars, cigarettes, candles, cheese, vegetable oils, canned meat and fish, sugar, chocolate, beer, shoes, clothing, cement, glass bottles, matches, paper, cordage, furniture, rugs, straw hats, refined petroleum products, lumber, and light iron products.<sup>5</sup>

The Venezuelan unit of exchange is the bolivar. The average rate of exchange each year from 1946 to February, 1949, has been 3.5. The approximate equivalent in United States currency is .2985.<sup>6</sup>

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5. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 5.

6. "Venezuelan Exchange Rates", Foreign Commerce Weekly, April 11, 1949.



## Chapter II

### Basic Factors Affecting the Development of Industries in Venezuela

With the highly important exception of the petroleum industry, the development of Venezuelan industries has been retarded by a number of interrelated factors. Probably the principal one (except in the petroleum industry) has been the extreme slowness of both domestic and foreign capital in investing in the development of the country's natural resources of raw materials, fuel, and power, and for the construction of adequate transportation facilities. Even if capital were forthcoming in the quantities necessary, however, there is a marked shortage of skilled labor within the country, such as would be required for the development of certain agricultural and mineral raw materials. Moreover, because of the low purchasing power of the majority of the people, and the high price levels in the country, there is a limited market for the products of domestic manufacturing industry. Except for petroleum and petroleum products, there are practically no foreign markets for Venezuelan manufacturers.

Factors affecting the development of agricultural, pastoral, and forest industries are numerous. Notwithstanding the large areas of good agricultural and grazing land,

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about two-fifths of the farmers live on eroded mountain slopes in the northern part of the country.<sup>1</sup> In general, agricultural techniques are not advanced, yields are low, and costs of production are high. Transportation facilities in the interior are extremely inadequate, and lack of storage in distribution facilities has tended to limit output. The development of agriculture also has been retarded to some extent by the prominence of the petroleum industry, which, because of higher wages and steadier employment, has attracted workers from farms in recent years. On the other hand, government revenue from the petroleum industry has been utilized to subsidize exports of various agricultural products.

#### Power

Venezuela is a mountainous country with heavy precipitation; this combination of factors provides the country with a vast hydro-electric potential. In addition, deposits of petroleum are large. Despite these resources, however, facilities for the production of electricity have not been developed extensively. Hydroelectric development has been retarded by the difficulty of securing capital; the initial investment required for such enterprises is much heavier than for electric installations using coal or fuel oil.

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1. U. S. Tariff Commission, Agricultural, Pastoral and Forest Industries in Venezuela, p. 7.





Moreover, the location of the water-power sites is frequently quite far removed from existing centers of industry, thus necessitating heavy expenditures for transmission lines and relay stations.<sup>2</sup> An additional factor is the difficulty and cost of transporting materials and labor to the sites selected for hydroelectric development.

### Transportation

Lack of adequate transportation facilities has retarded the development of Venezuela's industries. The llanos and the principal forested areas lie south of the northern highlands. In addition to the difficulties of crossing the mountain ranges, certain sections of the hinterland are subject to floods during the rainy season and in other sections no bridges span the principal rivers. Large parts of the country's agricultural, pastoral, mineral, and forest areas are accessible only by oxcart, pack train, or water transportation. There are virtually no facilities for the overland transportation of cattle from the llanos: they are driven on hoof to the distant consuming centers.

In 1946 there were nine railroads in Venezuela with a total of 570 miles.<sup>3</sup> The system is not unified; short lines link the important cities in the northern highlands and in

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2. Salzman, Otto H., National Economy of Venezuela, p. 26.

3. Pan American Union, Agriculture in Venezuela, p. 7.



the Maracaibo Basin with the seaports, but differences in gauges of track prevent the through movement of traffic over all routes. The important oil centers in the Maracaibo Basin are not connected by rail with the commercial cities of the northern highlands, and few railroads penetrate the interior of the country.

In recent years, the development of highways has been given much more attention than that of railroads; since 1936 the progress in highway construction has been noteworthy. The network of highways, however, comprising only about 8,000 miles<sup>4</sup> of roads of all types, is small compared with the area of the country. The best highways are in the northern highlands where the population and principal cities is concentrated; few extend far into the interior.

Inadequate land transport is compensated in part by water and air transportation. In addition to the coastal trade, and that on Lake Maracaibo, heavy traffic moves on the rivers, particularly the Orinoco. The network of streams, of which some 6,500 miles are navigable, allows trade between separated regions where no other means of communication exist.

In 1948, 8 airlines serviced the interior of Venezuela and offered connections between many cities which do not

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4. Salzman, op. cit., p. 10.



have all-weather roads leading to them.<sup>5</sup>

### Labor

Although the Venezuelan population appears large enough to support a moderate industrial development, there is a serious shortage of skilled labor. Inasmuch as the tendency is for the population to gravitate to the larger cities, there is in these places a plentiful supply of domestic servants and unskilled workers. This movement of population in turn, tends, under existing condition, to create a shortage of labor in the outlying areas for the development of agriculture or mineral raw materials. Statutes give the Federal Executive power to increase or shorten the established working day, permit work on holidays, fix minimum compulsory wage scales, and determine the proportion of nationals and aliens in specific enterprises. An 8 hour day, subject to the above, was established in 1936.<sup>6</sup>

### Markets

Domestic markets for the products of Venezuelan industries are small. Although Venezuela is one of the largest oil-producing countries in the world, the number of workers employed in the petroleum industry is not large and the contribution which this industry makes to the purchasing power of the Venezuelan people is small compared with the size and

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5. Stiles, J. A., "Transport Facilities in Venezuela", p. 782.

6. Soul, Eifron and Ness, Latin America In the Future World, p. 211.





importance of the industry itself. For about four-fifths<sup>7</sup> of the population, including principally the agricultural and pastoral groups, incomes are very small; the people live on a basis of practical self-sufficiency, and purchases are confined to bare necessities. In the period from 1943 to 1945, it was found that petroleum industry workers were more highly paid than workers of same skills in other industries. They earned from 10 bolivars a day upward, in other industries from 5 to 10 bolivars, farm laborers received from 2.50 to 3.50 bolivars.<sup>8</sup> Because of high import duties, high freight rates, and the necessity for importing a large portion of foodstuffs, clothing, and other essentials, living costs in Venezuelan cities for comparable groups are very much higher than in the United States.<sup>9</sup> The market for luxury and semi-luxury goods is confined to the high-income groups living in the cities. Development of the market for domestic goods rests upon the improvement of living standards as well as the obtaining of adequate and cheap transportation facilities.

#### National Policy

Industry in Venezuela has been encouraged by extremely high import duties on commodities of a kind produced within the country, and by exemptions from import duties on certain

7. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 13.

8. International Reference Service, Venezuela, p. 14.

9. International Reference Service, Living Costs in Venezuela, p. 3.





machinery and raw materials. The latter exemptions include imports by petroleum companies (largely oil-well and pipeline machinery and equipment) and other private imports of machinery, equipment, and raw materials, specially exempted for the purpose of fostering domestic industries.

The Venezuelan customs tariff, one of the highest in the world, has been employed to foster domestic production as well as to raise revenue. Since 1936, exchange operations in Venezuela have been subject to varying degrees of government control. Exchange operations are subject to the control of the Central Bank, and imports, to that of the Import Control Commission. Import quotas and licenses, employed since 1935, primarily to husband exchange balances, have been utilized since 1940 to foster the development of domestic industries.<sup>10</sup>

The rates of duty on basic individual import items in August, 1939, emphasize the height of the Venezuelan tariff structure. Wheat, flour, the most important food product imported into Venezuela (nearly 90 per cent of the Venezuelan requirement of wheat and rice are ordinarily imported) was subject to an average duty of 25.2 per cent of its original c.i.f. (cost, insurance, freight) cost; the duty on rice was the equivalent of 174 per cent.<sup>11</sup>

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10. U. S. Tariff Commission, Economic Controls and Commercial Policy in Venezuela, p. 6.

11. Ibid, p. 7.



A partial explanation of the extreme tariff situation is explained by Allen:

"As the result of an ancient evil, established probably when a tariff for revenue was more important than it has been since the advancing production of petroleum has made easier the problem of governmental revenues."<sup>12</sup>

According to an investigation made by the U. S. Tariff Commission,<sup>13</sup> the Venezuelan tariff is one of the principal instruments of raising national revenue. Between 1930 and 1940 tariff revenue accounted for more than one-third of total governmental income. Mentioned also is the fact that essential elements for a self-supporting industrial development are lacking in Venezuela; in part, to compensate for such disadvantages and thus to foster manufacturing industries. High cost industries have been established which show no indication of being able to operate independently of such aids. On this point, the American Economic Mission to Venezuela observed.

"For some time Venezuela has pursued a policy of extreme protectionism, but unfortunately high tariffs have not succeeded in accomplishing their avowed purpose; on the contrary, they have served to sustain inefficiency and high cost of operation."<sup>14</sup>

In the field of agriculture, export subsidies were in-

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12. Allen, Henry J., Venezuela, A Democracy, p. 163.

13. U. S. Tariff Commission, Economic Controls and Commercial Policy in Venezuela, p. 6.

14. Report to the Minister of Finance Submitted by the American Advisory Mission to Venezuela, Washington, 1940, p. 76.



augurated in 1934 primarily to relieve distress resulting from the depressed world market. The above was replaced in 1941 by special foreign-exchange premiums.<sup>15</sup> The government has made available machinery, seeds, fertilizers, and working capital for cooperative groups of small-scale farmers, dairymen, and stock raisers. In 1944, there were more than 600 rural cooperative units in Venezuela.<sup>16</sup>

Perhaps the most important governmental controls in Venezuela are those which extend to virtually all aspects of the petroleum industry. Concessions or permits are required for the exploration, extraction, refining, or transportation of petroleum products. These controls, instituted in part to regulate the development of natural resources and in part to represent the over-all interest of the country in an industry primarily financed by foreign capital, have for one of their principal purposes the raising of revenue. Government monopolies of the match and salt industries are like-wise maintained for fiscal reasons, although the resulting revenues are of minor significance.<sup>17</sup>

Two special agencies were created in 1936 to promote the improvement of agriculture, industry, and communications. First, a non-political National Economic Council, whose func-

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15. U. S. Tariff Commission, Economic Controls and Commercial Policy in Venezuela, p. 5.

16. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 11.

17. U. S. Tariff Commission, Economic Controls and Commercial Policy in Venezuela, p. 5.





tions are to study economic problems and to initiate and coordinate programs; second, the Venezuelan Development Corporation, an executive body. The corporation has a capital of \$43,000,000 and is assigned an annual allocation from the federal budget.<sup>18</sup> It is authorized to grant credit to private corporations and to subscribe to their shares, or it may set up its own subsidiary organizations to undertake projects unattractive to private enterprise. It is actively engaged in carrying out schemes of a short-term character, with particular emphasis on increasing food production. It is installing twelve grain elevators, the start of a country-wide network, and it has contracted for the purchase of 750 marine motors to be sold on credit to fishermen. On the industrial side, the corporation is studying the country's large water power resources and building a 15,000kilowatt plant near the industrial city of Maracay.<sup>19</sup>

In addition to national agencies, foreign sources have rendered assistance. In May, 1947, Mr. Nelson Rockefeller announced the formation of the Venezuelan Basic Economy Corporation. With an initial capital of 40 million dollars (U. S.) it aims primarily at the modernization of food industries. Operating under a contract with the Venezuelan government, this organization will be aided by contributions

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18. Keith, Hutchison, "Sembro el Petroleo", p. 304.

19. Ibid, p. 305.





from the oil companies operating in Venezuela and will also receive assistance from the Venezuelan government through the Development Ministry.<sup>20</sup>

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20. Salzman, Otto H., National Economy of Venezuela, Pan American Union, Washington, D. C., July 1948, p. 8.



### Chapter III

#### The Petroleum Industry

Petroleum is the most important commodity produced in Venezuela and its effect upon the general economy of the country is tremendous. For example, 95.15 per cent of all foreign exchange brought into the country in 1947 came from oil and 93.10 per cent in 1946.<sup>1</sup> The oil companies provided about 63 per cent of the total revenue taken in by the Venezuelan government, or about 84,500,000 bolivares.<sup>2</sup> This money is collected in a variety of ways. The government takes 16 2/3 per cent royalty to start with; then there is income tax, plus various import and export taxes. The government also makes a profit on its exchange operation with the companies; they must buy bolivares from the Banco Central de Venezuela at a slightly higher-than-current rate.

Petroleum is primarily the cause of the National Government's virtual freedom from internal or external debt and the fact that the Central Bank has gold and exchange reserves more than equivalent to the amount of paper money in circulation.<sup>3</sup> The petroleum industry has had its tremendous sweep to the leading position in Venezuelan economy within

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1. "Oil and Agriculture in Venezuela", p. 384.

2. Ibid. p. 384.

3. International Reference Service, Marketing Areas in Venezuela, p. 2.



a period of twenty-five years, and indications point to even further expansion.

### History

The history of petroleum development may be said to date from September 3, 1883, when a concession was granted for the exploitation of certain asphalt deposits in the state of Tachira. However, these operations were concerned only with the exploitation of natural seepages of petroleum and asphalt.<sup>4</sup> Later, other concessions were granted and in 1914, drilling operations began in the Maracaibo Basin Region. Beginning in 1917, the production of petroleum in Venezuela increased rapidly, and in 1921 the export of oil was begun on a commercial scale.<sup>5</sup> The output of the Royal Dutch-Shell combine in 1917 amounted to 119,000 barrels. This was sufficient to interest other oil companies which, up to that time, had been skeptical regarding Venezuelan oil rumors. In 1918, British controlled oilfields arrived on the scene, but five years elapsed before they produced a single barrel of oil. In the meantime, American oil men had surveyed the situation and decided to enter the field. The Standard Company of Indiana began operations in 1922, and the next year was followed by Gulf Oil Company.<sup>6</sup>

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4. Gorticoa, N. Veloz, Venezuela - 1924, p. 26. Fonento of the United States of Venezuela, Caracas, 1924, p. 26. (a translation).

5. Allen, Henry J., Venezuela - A Democracy, p. 224.

6. Leeming, J. L., "Venezuela's New Wealth", p. 85.



During the 1920-30 period, British interests were pre-dominant but were hard pressed by American companies. These American companies were: South American Gulf, Lago Petroleum which belonged to Standard Oil of Indiana, also Standard Oil of New Jersey, and Creole Petroleum who pooled their Venezuelan interests. The main British company was Royal Dutch-Shell.<sup>7</sup> During this period and up until 1935, foreign oil interests had been particularly fortunate with respect to legislation in Venezuela. Nowhere else in South America did they meet with such hospitable treatment. This open wooing of foreign capital was due to the efforts of General Juan Vicente Gomez, the iron handed dictator of Venezuela, who ruled for twenty-six years. (1909-1935).

Gomez left nothing undone to make foreign capital at home in Venezuela. Inasmuch as petroleum was the principal magnet for outside capital and ingenuity, assumed complete personal control of the oil industry. Four times, in 1910, 1914, 1922, and 1925, the national constitution had been rewritten at his behest in order that he might better accomplish this purpose.<sup>8</sup> During the last fifteen years of this twenty-six year dictatorship, American and British oil interests had under the benevolent protection of Gomez brought Venezuela into the position of being one of the

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7. Allen, J. J., op. cit., p. 225.

8. Hallgren, M. A., "Oil in Venezuela", p. 497.





world's leading producers of petroleum.

Exploratory and drilling operations reached a peak in 1930. During the period 1931-1933, production decreased 14 per cent from the 1930 peak and new investments ceased almost entirely. Toward the end of 1933, the oil companies began to increase their activities but it was not until 1936 that production and investment passed the 1930 level. The industry continued to advance with only a temporary recession in production in 1940, and by the end of 1948, crude oil production reached an all time high of 486,720,000<sup>9</sup> barrels, making Venezuela the second largest oil producing country in the world.

Crude Oil Production in Venezuela 1916-1948  
(Thousands of Barrels)

Year	1916	1917	1919	1921	1924	1926
Production	0	120	425	1433	9,042	36,911
Year	1928	1930	1932	1934	1936	1938
Production	105,749	136,669	116,541	136,103	154,794	188,174
Year	1940	1942	1944	1945	1947 (a)	1948 (a)
Production	185,570	145,000	257,046	321,902	435,236	486,780

(a) Data for 1947-48, taken from, The Oil and Gas Journal, December 30, 1948, p. 245.

Source - National Industrial Conference Board, The Petroleum Almanac (New York: 1946), p. 295.

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9. The Oil and Gas Journal, p. 245.



### National Policy

As a concession to popular opinion, the oil laws have been tightened. In 1936, a new law was enacted, but inasmuch as it applied only to new concessions, without correcting the liberties in regard to existing ones, it provided no solution to the fundamental problems. In December of 1938, another petroleum law was passed which increased royalties and taxes, but because of the stringency of its provisions regarding exploitation, none of the companies were willing to extend its operations.<sup>10</sup> The entire situation in short, was not at all conducive to any future development of petroleum.

In 1943, with General Isias Medina as President of the Republic, the government's willingness to establish a new relationship with the oil industry was made apparent. A new law, which is still in effect (1949), was worked out and is generally regarded as being fair and equitable for both the Venezuelan government and the oil companies.

The basic provisions of the law are that everything relative to the exploitation and exploration of petroleum belongs to the nation. The right to explore and exploit may be acquired from the government, by either Venezuelan nationals or foreigners legally domiciled in the country.

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10. "Venezuela's New Petroleum Law", p. 463.



Governments of foreign states or their dependent corporations, however, are specifically prohibited from acquiring any concessions.

Exclusive exploration concessions will be granted for three years, during which time the operator must pay an annual surface tax of two bolivares per hectare. During that period, the operator may drill wildcat wells to determine the possibilities of his property before converting it to an exploitation concession. At any time during the exploration period, the concessionaire may convert to exploitation, a maximum of half the land covered by his exploration contract, and upon conversion he must pay an initial exploitation tax of 8 bolivares per hectare. Concessions are granted for a forty-year period, the holders having a preferential right to an extension at the end of the first period.

Surface taxes have been so adjusted that oil companies can no longer profitably hold large land areas, but must develop them within a reasonable time.

A uniform royalty is established whereby Venezuela received  $16 \frac{2}{3}$  per cent of the crude petroleum extracted, payable either in cash or kind, according to the choice of the government.

Pipelines became common carriers under the law. A pipeline owner is obliged to transport the products of other





concessionaires, however, only if he has capacity beyond his own requirements.<sup>11</sup> Data concerning refining privileges is included later in this chapter.

The law offered definite advantages to both the nation and the oil industry. The government received additional protection and revenues. The companies obtained the important advantage of the extension of their concessions to forty years from the date that they were brought under the provisions of the new law.

In the latter part of 1945, when Romulo Bettancourt was president, Venezuela initiated a program known as "sebre el petroleo" (sowing the oil). This program involved the making of a definite assignment of the revenues received from oil to a broad program of economic development. Partly in royalties and partly in taxes, the government is now receiving approximately a fifty-fifty division of profits with the companies, which means large sums are enacted to be plowed into the improvement of agriculture, industry, and communications.<sup>12</sup>

#### The Venezuelan Oil Fields

The oil fields of Venezuela are most interesting and varied. Extreme difficulties are encountered in their exploration and exploitation.

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11. Ibid, p. 464.

12. Hutchison, K., "Sebre el Petroleo", p. 305.



"In dollar cost and in expenditure of human effort, energy and life, the development of the Venezuelan jungle oil territory parallels the digging and construction of the Panama Canal."<sup>13</sup>

The fields in the West - The Maracaibo under sea oil fields are among the most remarkable petroleum locales in the world. 'The portion of Lake Maracaibo which has been developed for oil, looks like a forest of derricks rising from a shoreless sea.'<sup>14</sup> The lake itself is in the shape of a hotwater bottle, 150 miles long and 50 miles wide. The city of Maracaibo is the stopper in the northern end where the lake empties into the Gulf of Venezuela. Through this shallow channel pass a continuous string of tankers on their way to the refineries on the islands of Oruba and Curacao.

The Bolivan Coastal field in the lake area has accounted for 66 per cent of the 4.5 billion barrels of oil produced in Venezuela to date, and delivers 52 per cent of current production. Shell operated on the land side of the field, Mene Grande in the one-kilometer strip offshore, Creole further out in the lake. Creole, which has 1,016 producing wells in the lake and 1,600 sureoil locations yet to drill, gets the lion's share of Bolivar Coastal Field production.<sup>15</sup>

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13. Phillips, H. A., "Oil for the tanks of Democracy", p. 25.

14. Roosevelt, Nicholas, Venezuela's Place in the Sun, p. 53.

15. "Creole Petroleum: Business Embassy", p. 71.



The fields in the East - These fields are marked by vast tropical jungles. "Early operations here were far more difficult than anything ever dreamed of in North America."<sup>16</sup> The company most responsible for the development of these fields was Standard Oil of New Jersey. Fields which were white elephants for other companies were taken over by Standard and through the use of tenacious persistence and the right handling of native help, achieved ultimate success.<sup>17</sup>

Costs per barrel average 35 per cent higher in the east than in the west.<sup>18</sup> The east relies entirely on pipelines to carry its crude to deep water terminals and refineries. Most of Venezuela's 700 miles of trunk pipe lines stretch over the rolling hills of the east where fields vary from ten to one hundred miles from the nearest terminals. Numerous laterals feed to the trunk lines and add materially to total length of lines now in use.<sup>19</sup>

Refineries - To date, most of the crude oil produced in Venezuela has been shipped as such to the Dutch Islands of Curacao and Oruba where it is refined and re-exported to the United Kingdom and the United States. Less than 10 per cent<sup>20</sup>

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16. Prewett, V., "Lanam of Venezuela", p. 26.

17. Ibid. pp. 25-27.

18. "Creole Petroleum: Business Embassy", p. 97.

19. Corfield, J. S., "Recent Activities in Venezuela's Petroleum Industry", p. 116.

20. Prewett, V., op. cit., p. 93.



is now refined in Venezuela. The refineries were established on these islands primarily because when they were built, most of the Venezuelan crude oil came from the Maracaibo Marketing Area and the sand bars at the entrance to Lake Maracaibo prevented the passage of ocean-going vessels drawing more than 11 feet.<sup>21</sup>

For some time the Venezuelan Government has been interested in the construction of additional refineries within the country. In pursuit of this development, the Ministry of Fomento issued a regulation in 1943 which provided that no future bids for exploitation concessions on national reserve lands would be considered unless applicants agreed to refine within the country 10 per cent of the oil from new concessions.<sup>22</sup> Several oil companies signified their intention to build new refineries and have now done or are doing so in order to comply with this requirement. The number of refineries in Venezuela at the end of 1948 was 13. The crude capacity of these refineries amounts to 219,100 barrels daily and the cracking capacity is 24,000 barrels daily.<sup>23</sup>

Present Status of the Oil Industry in Venezuela - All Venezuelan oil production and most exploration are divided

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21. International Reference Service, Marketing Areas in Venezuela, p. 2.

22. "Venezuela's New Petroleum Law", p. 464.

23. The Oil and Gas Journal, p. 245.





among thirteen companies representing United States, British, and Dutch capital. However, 94 per cent of the production is operated by three large interests having the following percentages of the total - Creole, (Subsidiary of Standard Oil of New Jersey) 45; the Royal Dutch-Shell group of three companies, 32; and the Gulf-operated Mene Grande Oil Company, 17.<sup>24</sup>

The oil companies employ between 40,000 and 45,000 workers and pay the highest wages in the country.<sup>25</sup>

In 1948, 37 per cent of Venezuelan oil went to North America, 34 per cent to Europe and Africa, 24 per cent to South America, and 5 per cent to Central America.<sup>26</sup>

The oil companies have done much to combat illiteracy and unhealthful conditions. As a result of an agreement between the Ministry of Education and some of the oil companies, scholarships have been awarded to geological students. Today there are many Venezuelans receiving scientific or trade educations in the United States financed wholly or in part by practically all American oil companies.

For example, the Creole Petroleum Corporation's Latin American educational program began as a matter of business expediency to develop a supply of competent personnel. It

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<sup>24</sup>: "Creole Petroleum: Business Embassy", p. 91.

<sup>25</sup>: "Oil and Agriculture in Venezuela", p. 384.

<sup>26</sup>: "Creole Petroleum: Business Embassy", p. 93.



was given impetus by Venezuelan legislation providing that all companies employing more than 2,000 should provide three scholarships to Venezuelans. It has been carried far beyond statute requirements as a policy of enlightened management.<sup>27</sup>

Creole Petroleum Corporation has built 16 schools and has spent over \$550,000 on them. Mene Grande Oil Company has established two schools with a capacity for 200 pupils in each.<sup>28</sup>

The oil companies have taken many steps to care for the health of their employees and indirectly, non-employees. Hospitals, some individually and one jointly built and operated by American and British-Dutch oil companies are caring for employees and their families. At the Mene Grande field, Shell has built a 90,000 dollar hospital. Creole has spent hundreds of thousands of dollars to build dispensaries in eastern and western Venezuela.<sup>29</sup>

Petroleum has meant much to Venezuela. It is counted upon to do much more for her in the future. "In other words", say Venezuelan businessmen, "if the oil wells continue to flow and the money holds out, we will become in the near future the most modernized and up-to-date nation on the continent."

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27. "The Three R's," p. 14.

28. Fanning, L. M., American Oil Operations Abroad, p. 56.

29. Ibid, p. 160.



## Chapter IV

### Other Mineral Industries

#### Gold

Next to petroleum, gold is the most important mineral found in Venezuela. The metal now ranks as the country's third most important export product, being exceeded only by petroleum and coffee. Although it occurs in most of the States, at the present time, gold is mined only in the Guiana Highlands, in the state of Bolivar. The principal mines are in the El Callao and Cindad Bolivar regions, from which the gold is shipped by air to Maracay. In 1941, approximately 81 per cent of the total output came from the New Gold Fields of Venezuela, Ltd., an English outfit at El Callao; 16 per cent from other concessions, including the French Mucopia mining company; and 3 per cent from individual panners.<sup>1</sup> It is estimated that at least twenty thousand individuals in this neighborhood make their living panning for gold.<sup>2</sup> According to Henry J. Allen<sup>3</sup>, a proper exploitation of the gold fields which would make profitable this mining of the low-grade ore might bring the production to \$50,000,000 a year as compared to the present production of \$10,000,000 worth a year.

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1. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 20.
  2. Venezuela, A Democracy, Henry J. Allen, p. 105.
  3. Ibid, p. 109.





The production of gold during recent years has been: 2,417 kilos in 1944, 2,390 in 1945, 1,436 in 1946, and 679 kilos in 1947.<sup>4</sup> Venezuela's steady decline in gold production since the peak year of 1940 has been due largely to the wartime difficulties encountered by mining companies in obtaining essential transportation and replacement equipment, complicated by continued unrest among the miners. During 1946, the weakened financial position of New Gold Fields of Venezuela, Ltd., the largest producer, was bolstered by a loan from the Venezuelan government. This new capital proved inadequate for continued operations, and on November 15, the properties were turned over to Guayana Mines, Ltd. This interruption of production resulted in a further decline in 1947.

#### Diamonds

Venezuela is an important source of diamonds, principally those of the industrial variety. Before 1937, production was declining, but in that year, large deposits were discovered in the Rio Peo region, which borders on one of the western tributaries of the Caroni River. This area, together with the Surukun placers, which lie deep in the Great Savannah, now accounts for most of the output, which is exported by way of Ciudad Bolivar. Exploitation of

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4. Inter-American Development Commission, The Industries of Venezuela, p. 3.



diamond-producing areas is restricted by the government to individuals who operate by panning and sluicing. Little equipment or capital is involved. Gold prospectors recently have been reported to be abandoning the gold fields to the Surukun placers; where production of diamonds has increased. Between 1937 and 1940, production averaged about 13,800 carats annually.<sup>5</sup>

#### Diamond Production in Venezuela, 1944-48

Year	1944	1945	1946	1947	1948
Diamonds, carats	22,037	12,769	20,021	61,634	75,513

Source - "Venezuela", Foreign Commerce Weekly, U. S. Department of Commerce, Washington, April 11, 1949, p. 32.

#### Coal

Coal occurs in a number of places in Venezuela. The total reserves are believed to be large, but no estimate of their extent is available. Small quantities of coal have been produced, principally in the government mines at Naricual, state of Anzoategui. The coal produced at Naricual is very brittle, and generally is formed into briquets instead of being marketed in lump form. In 1931, the reserves in the Naricual mines were estimated to be as high as 5.5 million tons.

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5. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 21.



Coal and Lignite Production in Venezuela, 1939-46  
(In thousands of metric tons)

1939	1940	1941	1942	1943	1944	1945	1946
3	5	6	9	11	12	7	4

Source - Bureau of Mines, Minerals Yearbook - 1946, (Washington, D. C., 1948) p. 346.

Iron Ore

Venezuela possesses important reserves of iron ore, but as yet they have not been developed on a commercial scale. Important sums are being invested in the exploitation of deposits of iron ore by interested companies: the Iron Mines Companies of Venezuela (a subsidiary of Bethlehem Steel Company) and the Olivar Iron Mining Company (a subsidiary of the United States Steel Corporation). The iron deposits are of great importance, and according to studies made by geologists, the reserves of this mineral in Venezuela exceed a billion tons, which with those of Brazil are sufficient in amount to meet the demands of American industries for many generations. The ores have the highest mineral content of the world and it is expected that an average of 66 per cent will be reached. The installations in the mines are proceeding rapidly and should be in normal exploitation condition early in 1949.<sup>6</sup> The iron deposits are found in the vicinity of Ciudad Bolivar and in El Pao, south of San Felix on the

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6. Inter-American Development Commission, op. cit., p. 3.



Orinoco River. A government-sponsored experiment is being carried out at present in the United States for the industrial reduction of iron ore by means of petroleum gas. It is reckoned that, if the experiments are successful, Venezuela would be able to produce first-class steel at a cost of \$12-\$15 per metric ton, as compared with \$40 in the U. S. at present.<sup>7</sup>

### Nickel

Sampling of the garnierite deposit at Lorno de Hierro near San Pedras, state of Aragua, was completed by the International Nickel Company. Development of the property will probably depend on current metallurgical research.

### Vanadium

During 1946, the United States imported 44 metric tons of flue dust containing 17 tons of V2O5, or 9 tons of Vanadium, from Curacao, compared with 61 tons of flue dust containing 21 tons of V2O5, or 1 tons of vanadium, in 1945. This represents material derived from crude petroleum of Venezuelan origin, though only a portion of the total potentially available from that source.<sup>8</sup>

### Asbestos

Cia. Anonima Minas de Amiant de Tinaquillo, which started operation of its asbestos mill west of Tinaquillo, state of

7. Stiles, J. A., "Venezuelan Coal Deposits", p. 342.

8. Bureau of Mines, Minerals Yearbook - 1946, p. 43.





Cojedes, late in 1945, continued at a restricted operating rate throughout 1946. Preliminary figures suggest that either the grade of ore, which had yielded 64,997 kilograms of fibres in 1946, or the efficiency of recovery was disappointingly low and that the extraction of asbestos in Venezuela must still be regarded as experimental.<sup>9</sup>

### Magnesite

The future of Venezuela's magnesite industry depends on the growth of domestic demand for calcined product. After 23 years of inactivity, production was resumed on Margarita Island in 1943 by La Industria Nueva Esparta, C. A. Deposits range in grade from 20 to 92 per cent magnesite; only the high-grade is being worked. The company ships crude to its plant at Palomar for calcining, and thence to its factory at Caracas.<sup>10</sup>

### Cement

The National Government, aware of the possibilities of this industry, has made efforts to encourage its expansion, especially through the Technical Services of the Ministry of Development. These services of the Ministry have prepared reports on the value of several pits and the chemical analysis of materials to aid in the installation of new plants.

In addition to the three plants in Caracas, La Vega,

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9. Ibid. p. 43.

10. Ibid.



Valencia, and Barquisimeto in 1946, two more came into production in 1947, at Maracaibo and San Cristobal, bringing the present production capacity to more than 200,000 tons a year. With the increased capacity of the La Vega and Valencia plants and the new Pertigaleto works in construction, it is expected that by the end of 1949, production will have reached 500,000 tons.

Important materials for this industry, imported free of customs duty, include explosives, refractory brick, machinery, and paper cement bags.

#### Cement Production, 1938-1947

Year	Tons	Bags
1938	39,900	940,000
1940	87,100	2,050,000
1941	115,500	2,700,000
1944	119,700	2,800,000
1945	115,800	2,700,000
1946	128,300	3,100,000
1947	145,881	3,400,000

Source - The Industries of Venezuela, Inter-American Development Commission, Washington, D. C., June 1948, p. 12.

#### Other Minerals

Other minerals occurring in Venezuela include copper, tins, cinnibar, mica, rock crystal, asphalt, and salt. Most of these, however, are not developed on a commercial scale. The salt mines, worked by the government, have an annual output of about 25,000 tons.<sup>11</sup>

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11. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 21.



## Chapter V

### General Characteristics of Agricultural, Pastoral, and Forest Industries

The prominence of petroleum and its products in the foreign trade of Venezuela has tended to obscure the importance of agricultural industries, in the national economy. The United States in 1930, had less than a fourth of its gainfully occupied people working in agriculture, forestry and fishing. But in Venezuela, the people so engaged were three-fourths.<sup>1</sup> Farm and livestock industries together accounted for more than two-fifths of the total national wealth before the war.<sup>2</sup> Until 1925, exports of agricultural products, principally coffee, were more important than those of petroleum, but such products do not now constitute a large part of the greatly increased value of total exports.

Venezuelan agricultural products may be divided into those produced principally for export, and those grown chiefly or entirely for domestic consumption. Coffee and cacao are the principal export products. Products grown chiefly for domestic consumption, and in quantities generally insufficient to meet domestic requirements, are sugar, corn, yuca, yams, beans, peas, onions, garlic, and tobacco, as well

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1. Soule, Effron and Ness, Latin America in the Future World, p. 61.

2. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 4.





as a wide variety of indigenous fruits, including bananas, mangoes, and coconuts. Domestic production of cotton supplies part of the country's requirement.

Although Venezuela has large areas of tillable lands, it depends on foreign sources for a large part of its foodstuffs. Domestic output of some foodstuffs must be supplemented by substantial imports; among these are rice, potatoes, wheat (in the form of flour), barley, and oats. Imported food products of which there is little or no domestic production, include olive oil, fresh temperate-zone fruits, and canned fruits and vegetables.<sup>3</sup>

Pastoral industries occupy a prominent place in the economy of Venezuela. Cattle raising is of particular importance in supplying meat and dairy products for domestic consumption, as well as live animals and hides and skins for export.

Extending eastward from the Andes and southward from the coastal range to the Orinoco River and the border of Columbia, the llanos form the vast grazing area of Venezuela. Although a large part of this area is subject to a wet season, during which much of the land is flooded, and to a dry season when the grasses become parched, the herds are able to maintain themselves. The northern part of the llanos

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3. Slazman, Otto H., National Economy of Venezuela, p. 2.



is sufficiently elevated to escape floods, and many herds, especially in the state of Apure, migrate north during the rainy season.

The census of 1936-1937 reported 311 million cattle in Venezuela; other livestock at that time included 615,000 goats, 356,000 hogs, 62,000 sheep, 194,000 horses, 191,000 asses, and 43,000 mules. Horses, mules, and asses are widely used in all parts of the country.<sup>4</sup>

The forest cover of Venezuela, extending over about two-fifths of the land area, constitutes one of the large timber resources of Latin America. Areas in the coastal range, the Venezuelan Andes, and the Maracaibo Basin are forested; extensive clearing, however, has been made in these regions for agriculture. Except for small groves and fringes of forest growth along the rivers, which contain many palms in addition to other species, the llanos are treeless. Most of the vast forests south and east of the Orinoco River are unexploited. Large areas, particularly in the Territory of Amazonas and the Guiana Highlands near the Brazilian and British Guiana frontiers, are virtually unexplored. The major portion of the forested area of Venezuela is owned by the government.

A number of factors have accounted for the slow

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4. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 7.



development of agriculture, pastoral, forest, and fishery industries. The country is sparsely populated, the concentration of population being in the northern highlands.

Notwithstanding the large areas of good agricultural and grazing land, about two-fifths of the farmers live on eroded mountain slopes in the northern part of the country.<sup>5</sup>

In general, agricultural techniques are not advanced, yields are low, and costs of production are high. Transportation facilities in the interior are extremely inadequate, and lack of storage and distribution facilities has tended to limit output. The development of agriculture also has been retarded to some extent by the prominence of the petroleum industry, which, because of higher wages and steadier employment, has attracted workers from farms in recent years. On the other hand, government revenue from the petroleum industry has been utilized to subsidize exports of various agricultural products.<sup>6</sup>

Ownership of land in Venezuela is not widely distributed. There are many large estates, particularly near Caracas and Valencia, as well as in the llanos. The extent of the concentration of ownership can be seen from the fact that in 1941, of all the agricultural proprietors 4.4 per cent held 78.7 per cent of all the arable land. Of the

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5. Ibid.

6. Ibid.





3,437,683 included in these holdings, only 708,773 hectares were actually cultivated.<sup>7</sup> The government owns and operates large acreages, some of which are under irrigation; part is used for grazing, and part is cultivated. Sugar cane and rice are the principal crops grown on the government-owned irrigated lands.

The llanos, comprising about 130,000 square miles, or more than one-third of the total area of the country, are used almost exclusively for grazing cattle. It is estimated that not more than one-tenths of 1 per cent of the llanos is under cultivation: most of the cultivation area is along the rivers.<sup>8</sup> The ranches in the llanos are large, averaging between 2,000 and 3, 00 each. Most of the cattle are raised in the states of Apure and guarico, which accounts for about two-fifths of the total number.<sup>9</sup>

The small population of the country, about 4 million persons, or about 10 to the square mile, does not afford an abundant supply of labor in ordinary times. Most of the farmers work small plots; many hired workers, however, are employed on coffee and cacao plantations. Large numbers of people are employed throughout the year on the coffee properties; additional workers are engaged during the harvesting season, and many are employed in the processing and

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7. "Oil, Agriculture and Industry in Venezuela", p. 383.

8. H. H. Bennett, D. S. Hubbell, W. K. Hull, and J. E. Caudle, Land Conditions in Venezuela.

9. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 7.





marketing of coffee bean.<sup>10</sup>

One of the principal difficulties of Venezuelan agriculture has been the lack of adequate facilities for agricultural credit. Recognizing this situation, the Venezuelan Congress in 1928, established the government-controlled Agricultural and Cattle Bank (Banco Agricola y Pecuario) to provide credit to farmers and ranchers at reasonable rates of interest and on adequate terms. Other agrarian reforms include the creation in 1936 of the Ministry of Agriculture and Animal Husbandry (Ministerio de Agricultura y Cria); and in 1937 the Agricultural Experiment Institute (Instituto Experimental de Agricultura) was organized. Technical missions from the United States, Argentina, and other countries were engaged. Schools of agricultural sciences were formed, and many scholarships were provided to assist students in attending these schools. The government also offered scholarships to enable Venezuelan students to attend foreign technical schools.

The functions of the Agricultural and Cattle Bank have been expanded greatly since 1938. In 1939 the Bank accepted coffee from debtors in payment of their indebtedness. In 1940, it was authorized to buy coffee in order to maintain prices and to prevent speculation. The Bank acquired more

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10. Ibid., p. 8.



than one-third of the total coffee harvest in the crop year 1940-1941; and more than four-fifths in 1941-1942.<sup>11</sup> The Bank also assumed the task of grading the coffee, which resulted in more favorable in the United States Market. In 1940 the Bank was authorized to purchase grains as well as coffee and was charged with the administration of grain elevators, flour mills, and projects for the cultivation of rice and for the sale of seed potatoes to farmers at cost. The Bank now maintains 9 offices for buying coffee and 12 for purchasing wheat; it also operates 5 flour mills, several grain elevators, and 10 rice plantations. The Bank also finances two meat-packing plants owned and operated by the government, and extends credit to raisers of livestock. The Bank was extended a line of credit by the Export-Import Bank of Washington, in the amount of 3 million dollars on April 12, 1944.<sup>12</sup>

The low purchasing power of most of the people of Venezuela and inadequate transportation facilities have limited the domestic market for agricultural, pastoral, and forest products many of the agricultural and pastoral groups have to maintain a more or less self-sufficient economy. Surpluses produced by small-scale farmers are sold principally for sole consumption in the immediate vicinity. Lack

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11. Pan American Union, Agriculture in Venezuela, p. 8.

12. Ibid., p. 9.



of storage facilities on the farms compels many producers to market their surplus crops at harvest time when prices are low. The production or harvesting of perishable foods is often limited to the quantity which the local markets can consume or distribute without special handling or storage facilities. A few important agricultural, pastoral, forest, and marine products move from Venezuela to foreign markets. The two principal agricultural export products, coffee and cacao, bring high prices in world markets. Hides, skins, and Margaritan pearls also have been important articles sent to foreign markets since colonial times.<sup>13</sup>

In 1940, Venezuela joined the American Society of Agricultural Sciences. The purpose of the society is to advance scientific agriculture in the republics through individual and collective effort, to provide a central organization for the coordination of the agricultural sciences, and to promote friendship among workers in the agricultural sciences in the American Republics.<sup>14</sup>

In 1947, Venezuela received 15,000 immigrants of all classes, of this number 3,000 were displaced persons. It has agreed with the International Refugee Organization in Geneva to accept 15,000 displaced persons for resettlement. Although Venezuela's immigration is not wholly for agriculture,

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13. U. S. Tariff Commission, Agriculture, Pastoral, and Forest Industries in Venezuela, p. 9.

14. Soule, Efron and Ness, op. cit., pp. 244-5.





the government has placed greatest emphasis on the selection of agricultural workers.<sup>15</sup>

Also during 1947, the Venezuelan Congress passed a farm-tenant act that somewhat restricts private rights of ownership of land. The act provides that uncultivated lands can be acquired by those who wish to farm them, and that tenants cannot be dispossessed except under limited conditions. Agricultural commissions have the authority to settle such matters as the burning of woods for land clearing, rents tenure, and disputes between landowners and tenants. Appeal from the rulings of these commissions is provided for. The bill was generally opposed by landowners, who claimed it conferred rights, but no duties on the tenants.<sup>16</sup> These latter facts further illustrate Venezuela's efforts to combat her agricultural inadequacies.

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15. International Reference Service, Economic Review of Venezuela, p. 3.

16. Ibid. p. 4.



## Chapter VI

### Principal Individual Agricultural Industries

#### Commodities produced primarily for export.

##### Coffee

Venezuela, with an annual production of about 150 million pounds, in most years ranks third among the Latin American countries as a producer of coffee, following Brazil and Columbia. Coffee constitutes one of the primary sources of wealth in Venezuela and is second only to petroleum in total export value.

Venezuelan coffee, which produced primarily for export, is of the "mild" type used principally for blending purposes. The principal coffee-growing areas of Venezuela are in the Northern Highlands, particularly in the states of Tachira, Trujillo, and Merida, and in the coastal range. Coffee generally is grown at elevations of 1,700 to 4,000 feet; the better grades being grown at even higher elevations; but there the trees grow more slowly and the yield per tree is smaller. The census of the coffee industry in 1940 reported 69,855 coffee plantations with a total area of 750,492 acres, or an average of 13.6 acres each. The number of trees under cultivation was 566 million, 85 per cent of which were productive. In general, coffee properties are small; those having fewer than 10,000 trees each accounted in 1940 for about one-third of the total number of coffee<sup>1</sup>

1. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 12.



trees in the country, and for about three-eighths of the total production of coffee. There were 625 plantations with more than 100,000 trees each, and 16 with more than 1 million each.

Techniques of planting and cultivating coffee in Venezuela, in general, are not advanced. Usually coffee is propagated by transplanted volunteer plants rather than by choice nursery stock. Many of the producing trees grow on eroded mountain slopes and are more than 50 years old. Here, yields are low, averaging less than one-half pound per tree for the country as a whole, and the quality of the coffee is not uniform.

The harvesting season begins in September in the lowlands and extends through January in the mountains. Until recent years, more than half of the coffee was processed by the relatively inexpensive dry method (trillado), which involves drying the berries in sunlight and removing the outer covering by machine. Preparation of "washed" coffee (descerezado) requires additional time and labor, but produces coffee of finer quality. Washed coffee commands a higher price than unwashed, and exports of washed grades are granted a more favorable exchange premium than those of the unwashed grades. In recent years, washed coffee has accounted for an increasing proportion of total exports from Venezuela; in the period 1933-1936, the proportion was slightly



more than one-third of the total; in 1942, more than five-eighths was of this type.<sup>2</sup>

In past history the industry suffered grave crises because of periodic low prices and competition of other countries. In 1928 the growers considered abandoning coffee cultivation because the price had descended to eight pesos a bag (132 pounds). Even with the low prices received at various times, coffee exports brought in over forty-three million bolivares to the growers between the years 1928-1938.<sup>3</sup>

The chief European importers of Venezuelan coffee were Germany, France, Spain and Denmark. From 600,000 to 900,000 sacks weighing 132 pounds each were exported annually, but in the year 1936, Venezuelan coffee exports reached a high of 1,026,042 sacks. This was the result of coordinated work of the National Coffee Institute which was founded in that year. Until 1935, the coffee industry was conducted by independent growers, without government aid or orientation.

In 1948, coffee added 10,000,000 dollars to the national income, as compared with 9,200,000 dollars in 1947. Venezuela exported 31,376,860 kilos in 1947 and 37,373,000 kilos in 1948. The latter figures contrasted with the 1913

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2. Ibid. p. 11.

3. Pan American Union, Agriculture in Venezuela, p. 1.





export<sup>4</sup> figure of 64,417,885 kilos, show how greatly coffee exports have declined in the past forty years.

### Cacao

Since colonial times, cacao has been cultivated in Venezuela. The excellence of its fruit and the abundance of the first harvests gave it wide reknown. Today, however, only a small proportion of the world production of cacao comes from Venezuela; from 1927 to 1953, Venezuela accounted for about 3 per cent of the world total, and since that time, for only a little more than 2 per cent.<sup>5</sup> Today the principal zones where cacao is grown are in the states of Miranda, carabobo, and Yaracuy along the coast, the Caribe River, and in the vicinity of the cities of El Pilar, Barlovento, Irapa, and Guira, and the Federal Territory of the Amacura Delta. There are about 5,000<sup>6</sup> plantations in the country, but most of the holdings are small. Although cacao is known locally by the district which produces it, there are two principle classifications, "el criollo" or sweet, considered the best, and "forastiro" or foreign. The "Criollo" is grown primarily on the plantations of Maracaibo and in the states of Aragua, Carabobo, and Yaracuy. This type is more subject to disease infestation and the seeds of it, though larger, are

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4. Stiles, J. A., "Venezuela Plans Higher Agriculture Output", p. 237.

5. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries of Venezuela, p. 14.

6. Pan American Union, Agriculture in Venezuela, p. 13.



less numerous. Two harvests are produced a year. The main harvest extends from April to June; a smaller crop is obtained in December and January. During the decade 1931-1940, between 35 million and 39 million pounds have been harvested annually.<sup>7</sup> As climactic conditions in Venezuela are unsuitable for the storage of cacao, no large surplus stocks are accumulated. Only a small part of the cacao crop is absorbed by the domestic market; almost all of it is exported.

Cacao ranks second among Venezuelan exports of agricultural commodities and fourth among total exports. The production of cacao in 1948 has improved considerably over previous years. Cacao exports in 1948 totalled 24,468,000 kilos, in 1947 exports totalled 11,731,540 kilos;<sup>8</sup> increased prices are largely responsible for the improvement. In the years immediately preceding the war about 70 per cent of Venezuelan exports of cacao, in terms of quantity, went to Europe; the United States accounted for about 13 per cent of the total in 1938 and 33 per cent in 1939.<sup>9</sup> The quantity of cacao exported in 1946 decreased 20 per cent from 1938, with an increase of 210 per cent in the amount received for it.<sup>10</sup>

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7. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 14.

8. Stiles, J. A., "Venezuela Plans Higher Agriculture Output", p. 15.

9. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 15.

10. Inter-American Development Commission, The Industries of Venezuela, p. 4.



Since July, 1935, the cacao industry has been aided by export subsidies. For each of the years beginning June 24, 1934, and June 24, 1935, appropriations of 10 million bolivares were authorized to aid the growers of coffee and cacao, the subsidies being graduated in order to extend proportionately greater assistance to the smaller producers. In 1936, specific subsidies for cacao, based on weight, were established, from then until July, 1941, growers were paid a direct subsidy of 30 bolivares per 10 kilograms. Since July, 1941, a premium has been paid for each dollar of foreign exchange derived from exports of cacao and turned over to the central Bank of Venezuela.

Agricultural commodities produced principally for domestic consumption.

#### Sugar and Papelon

Although sugar cane is grown in many areas in Venezuela, it is particularly well adapted to the warm interior valleys and to the coastal region. The state of Zulia is the principal cane-growing area, as well as the center of production of "white" sugar (an unrefined product). White sugar is produced also in the states of Carabobo, Miranda, and Tara. The grinding season ranges from 6 to 10 months in the various producing area; some mills grind throughout the year. A number of centrifugal mills produce ordinary raw and washed white sugar. "Papelon", a brown cake sugar which is more important in the diet of Venezuelans than white





sugar, is produced for local use by small mills on almost every sugar cane plantation.

About 30 per cent<sup>11</sup> of the sugar crop, as an average, is lost as a result of the crude milling processes still in use. The cost of production has kept sugar from becoming an export crop, for the domestic consumption requirements are barely filled. In some years Venezuela has exported small amounts of sugar to Columbia, but as a rule, it is not produced in export quantities.

Rum is distilled in Venezuela from domestic sugar. About one-fifth of the total income from the sugar crop is obtained from that part which is made into rum for local consumption. Considerable quantities of sugar are also used in the distillation of industrial alcohol.

The production of sugar has greatly increased in the past 15 years. Production in 1936 amounted to 13,037,065 kilos; in 1940, 19,173,264 kilos; in 1944, 32,659,559 kilos; in 1948, 42,852,000 kilos.<sup>12</sup>

### Cereals

Corn, one of the principal foods of the Venezuelan people, is grown on a wider scale than any other agricultural commodity. The 1948 crop established a record, the total production being 300,000 tons, previous years averaged

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11. Pan American Union, op. cit., p. 15.

12. Stiles, J. A., "Venezuela Plans Higher Agricultural Output," p. 238.



half the latter figure.<sup>13</sup> Although all of the states and almost every farm produces some corn, about two-thirds of the crop is grown on the slopes and in the valleys of the Cordillera Merida and the coastal ranges. Corn usually is grown on small plots of ground by primitive methods. The yields average 20 bushels per acre in Trujillo, the principal producing state.<sup>14</sup>

Because of the warm, moist climate in most parts of Venezuela, harvested corn is susceptible to attacks by weevils. Unless properly stored, it is ruined. The government tries to avoid fluctuations in price by constructing granaries in different regions for storage after heavy harvests, and guaranteed a minimum price for this cereal in 1946. These facilities, however, are able to handle only a small part of the corn harvest.<sup>15</sup> The Venezuelan Development Corporation has a grain-storage program well started. This, when completed in 1949 or 1950, will provide storage facilities for 39,000 tons, and for the first time the country will be in a position to protect a substantial part of its cereal harvests.<sup>16</sup>

Rice, another staple food in Venezuela, is widely cultivated, generally on small plots averaging less than 3 acres

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13. Ibid. p. 239.

14. Pan American Union, op. cit., p. 12.

15. Ibid.

16. International Reference Service, Economic Review of Venezuela, 1947, p. 3.



each. Before World War II, Venezuela imported practically all its rice from Europe and Asia, with an annual average of 14,110,537 kilograms. When it became impossible to import enough rice to supply the demand, the installation of nurseries and experiment centers made it possible to obtain a harvest of 10,000,000 kilograms of improved rice in 1942. From that time on, the production has been increasing.<sup>17</sup> At present, the estimated demand is 50,000 metric tons, and local production has reached 26,000 tons.<sup>18</sup> As a part of its program to encourage rice culture, the government has constructed four large and four small rice mills, and distributes seed to growers free of charge.<sup>19</sup>

Wheat, oats and barley are not grown in large quantities in Venezuela. Merida, the principal producing state, accounts for more than half of the small output. Wheat is grown only in the Cordillera Menda; because of high transportation costs, it does not move to other regions. The greater part of the domestic requirements of wheat, barley, and oat products is satisfied by imports. On the basis of value, wheat flour is the most important foodstuff imported into Venezuela.

Today as little as 29,640 acres are planted to wheat,

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17. Pan American Union, op. cit., p. 13.

18. Stiles, J. A., op. cit., p. 239.

19. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries of Venezuela, p. 16.





with a production of from 5,000 to 6,000 metric tons, compared with an annual 45,000-ton consumption. But consumption requirements are estimated at 132,000 tons per year; thus until suitable seeds for yield in tropical lands are found, it will be necessary to continue the importation of grain.<sup>20</sup>

### Vegetables

While the chief carbohydrate food of the Venezuelans is corn, followed closely by plantanos, yams and cassava, the domestic potato production has increased fifteen times in the interval between 1939 and 1943.<sup>21</sup> This marked change in production is the result of importation of seed potatoes by the Ministry of Agriculture and Animal Husbandry, which sells them to the farmers at cost price.

Other vegetables which are produced in great abundance throughout the country are black-eyed peas, black and red beans. According to the census of 1936-37, production of the principal vegetables at that time was as follows: Yuca, 91 million pounds; Yams, 21 million; beans 38 million; peas, 12 million; onions, 217 million; and garlic, 710,000 million.<sup>22</sup>

### Fruits

Very few fruits are produced for exportation, though

20. Stiles, J. A., op. cit.

21. Pan American Union, op. cit., p. 17.

22. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 16.





a few thousand bunches of bananas are sent to the Dutch Islands of Curacao and Aruba. In Venezuela the banana is classed as a minor fruit on the local market, much less important than the plantano. There are two causes for its unimportance - indifferent cultivation which ignores the sigotaka disease when it should be fought, and a transportation system which requires that the fruit be picked at a very early stage so that it can withstand rough handling. For this reason, the fruit must be grown on unsuitable soils near consumption centers rather than on distant fertile lands.

Coconuts are enjoying a boom because of the high price being paid for copra rather than for its fruit. The copra brought \$350 per metric ton f.o.b. Puerto Cabello in 1945.<sup>23</sup> Coconuts are replacing cacao in the Delta Amacure because of the high price and also because of disease which has attacked cacao in this region.

#### Cotton

Another product of ancient culture in Venezuela is cotton. By 1782, it grew abundantly in the valleys of Aragua, Valencia, Barquismeto, Barinas, and in the Province of Cumana. Forgotten for some time, the production of cotton has grown in the past few years as a result of an official action of

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23. Pan American Union, op. cit., p. 18.



the Ministry of Agriculture and Animal Husbandry to supply the requirements of the textile industry. Before 1938, this industry depended almost entirely on importations from the United States and Peru. By the end of 1939, the Ministry had developed the cultivation of cotton to such a degree that they were investigating different varieties, studying plagues and means of combatting them, distributing seed, insecticides, and fungicides to the planters, and lending machinery and establishing credit.

At the present time there are ten cotton zones comprising a total area of 25,000 hectares. The production per hectare is some 700 kilograms of raw cotton and the average yield in fibre is about 35 per cent.<sup>24</sup> The Ministry of Agriculture and Animal Husbandry has established an agricultural machinery service in the Cotton Grange of Boca del Rio, state of Aragua, where the best plantations are found.

In 1939, the consumption of cotton in Venezuelan mills was 2,560 tons, of which 2,419 tons was domestic cotton and 141 tons was imported.<sup>25</sup> In 1943, consumption grew to 4,956 tons, of which 3,060 tons was domestic cotton and 1,895 tons was imported.<sup>26</sup>

#### Tobacco

Most of the tobacco consumed in Venezuela since

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24. Ibid., p. 16.

25. Inter-American Development Commission, op. cit., p. 7.

26. Stiles, J. A., op. cit., p. 239.



colonial times has been produced within the country. The present output, approximating 6 million pounds annually, ordinarily satisfies domestic requirements.<sup>27</sup> Most of the tobacco grown is a dark air-cured type, utilized in the production of "black" cigars and cigarettes. In recent years, increasing quantities of light-leafed cigarette types, developed from seed originally imported from the United States, have been produced. This has allowed the manufacture of cigarettes similar in quality and taste to the "American type" that has been growing in popularity in Venezuela. The manufacture of cigarettes, which is confined to Caracas and Valencia, is now one of the larger factory industries of the country. In 1937, the industry consumed about 5 million pounds of tobacco and produced more than 1.5 billion cigarettes.<sup>28</sup> A negligible part of the tobacco used in Venezuela is for pipe-smoking and chewing. The tobacco industry is protected by high import duties on both unmanufactured tobacco and tobacco products.

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27. Stiles, J. A., "Higher Livestock Output Being Attempted", p. 289.

28. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 18.





## Chapter VII

### Pastoral, Forest, and Marine Products

#### Cattle

Until the last six years, livestock owners managed their holdings in a very primitive manner. No attention was given to the selection of cattle, location of pastures, providing clean water or to transportation and other phases vital to the betterment of the industry. For this reason, cattle raising had a low remunerative yield and many workers migrated to the cities in search of a more secure livelihood. Now the efforts of the ranchers are being directed toward a complete renovation of the industry under the supervision of the Ministry of Agriculture and Animal Husbandry and the Agriculture and Livestock Credit Bank.<sup>1</sup>

The three principal cattle raising zones are those of the llanos, the northern central area, and the Andean state of Zulia. The chief obstacle of the cattle industry in the llanos region is the isolation from centers of consumption. Cattle must be driven many miles over unimproved routes which are passable only in the dry season. The hot weather, scanty pasturages, and long marches reduce the value of the cattle by as much as one-half. At the present time, the government is planning small holding grounds for use by

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1. Pan American Union, Agriculture in Venezuela, p. 21.



animals enroute to market, with good water and planted pastures, at intervals equivalent to a one-day march.

The ranching zone of the Andean states of Tachir, Trujillo, Merida and a part of Miranda is more limited but the pastures are of relatively good quality; in contrast to the other zones this area is divided among small owners. In the third zone, the dairy industry is of greater importance.

The government of Venezuela has encouraged the exportation of live cattle, originally by a subsidy and later by a premium, on foreign exchange derived from exported cattle. Because of increased prices, however, the exchange premium was discontinued by a decree of March 4, 1942. The number of cattle shipped abroad fluctuates markedly from year to year. The exports have gone principally to Columbia and the islands of the West Indies. In 1940, exports of cattle were valued at 1,150,000 bolivares (\$372,000).<sup>2</sup> The government also assists the domestic cattle industry by prohibiting imports of meat, except fowl, ham, and bacon, and by levying high import duties on cattle products such as sole leather, butter, cheese, and preserved milk. The number of cattle in 194 was estimated at 4,264,556.<sup>3</sup>

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2. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 18.

3. Steinberg, S. H., The Statesman's Yearbook, p. 1370.



## Cattle production in Venezuela, 1939-1943

Year	Steers for export (head)	Steers for slaughter (head)	Total (head)
1939	26,217	250,415	276,632
1940	20,841	251,688	272,529
1941	25,295	255,543	280,839
1942	44,964	252,898	297,862
1943	44,108	240,616	284,724

Source - Pan American Union, Agriculture in Venezuela, P. 23.

Dairy Products

The demand for dairy products far exceeds the domestic supply, it is necessary that they be supplemented by imported products. More milk and milk products also are greatly needed in the Venezuelan diet, particularly among low-income groups. The high prices of dairy products, however, make them almost prohibitive to many people.

Milk production of the Venezuelan criollo cow is small, averaging about 7<sup>4</sup> pounds daily. Apart from that destined for the making of cheese and butter, the production of fresh milk was calculated in 1948 to be 120 million liters per year.<sup>5</sup> Little cream or butter is consumed in the country; cheese is the principal dairy product. The feeding of grain and concentrates, in addition to pasture and roughage, is limited almost exclusively to dairies in the vicinity of the larger cities. The usual practice is to milk the cows

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4. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 19.

5. Stiles, J. A., "Higher Livestock Output Being Attempted in Venezuela", p. 289.



once daily, only as long as the yield is more than 1 quart in addition to the nursings of the calf. Except in a few modern plants, dairy products, in general, are produced in Venezuela under primitive conditions.

Powdered milk is in great demand in Venezuela because, when reconstituted, it is more economical than pasturized fluid milk, is of uniform quality, keeps well, and is sanitary. It has not been manufactured in the country, however, largely because of the insufficient supply of fluid milk. Before the war, more than half of the total milk requirements of the country were provided in the form of imported dried whole milk.<sup>6</sup>

Cheese is the most important processed dairy product in Venezuela; about 24 million pounds, all of which is made on farms, is produced annually for domestic consumption.<sup>7</sup> Farmers and ranchers sell any surplus above their own requirements in the local markets. Commercial producing centers, principally in the state of Zulia and in the llanos, are regions where the absence of good roads and other transportation facilities make the shipping of milk almost impossible. Cheese is made under rather primitive conditions as a result of which, much of the fat content is lost. The two principal

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6. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 20.

7. Hunziker and Hodgson, The Dairy Industry of Venezuela, p. 26.





types of cheese made in Venezuela are fresh cheese with soft rind and boiled cheese with soft rind; no cured cheese is produced. In addition to that produced within the country, more than 1 million pounds of cheese is imported annually in ordinary times.

#### Other Livestock

Although cattle raising is the principal pastoral industry in Venezuela, large numbers of goats, hogs, and burros are also raised. Sheep are of little importance, although small herds are grazed in the mountains. Burros are used principally to transport agricultural products. Horses, as well as mules and donkeys, are used on the ranches for the herding of cattle.

#### Hides and Skins

Although deer, sheep, and reptile skins are produced and processed in Venezuela, only cattle hides and goat and kidskins are produced on a commercial scale. There are no official statistics to show the output of hides and skins; it is estimated, however, that 400,000 cattle hides and 1.1 million goat and kidskins were produced in 1942. Exports of cattle hides are estimated to be about 150,000 annually, of which the United States took about 5 per cent in pre-war years and about 40 per cent in 1941 and 1942. Annual exports of goat and kidskins from Venezuela usually have



between 800,000 and 900,000 skins. The United States<sup>8</sup> usually has taken about 95 per cent of the total.

### Forest Products

Consumption of forest products is small. Production is principally for export, but shipments of forest products constitute only a small part of the export trade. In addition to wood, exports of forest products include rubber, balata, tanning materials, dyewoods, and tonka beans.

Woods - Of the 138,000,000 acres of forest land, one-half of the total land area of Venezuela, it is estimated that almost 60 per cent of the vegetation is commercial timber,<sup>9</sup> most of it is inaccessible because of its remoteness from transportation and methods of communication. In 1946, the value of timber exports amounted to 6,216,140 bolivares and exports amounted to 504,500 bolivares.<sup>10</sup> Because of rapid deterioration and high prices, however, little lumber is used within the country. Only caoba (local mahogany), bitter cedar, and chemically treated lumber are able effectively to resist dry rot and the depredations of termites and other insects. Some wood, however, is used in the construction of buildings, furniture, vehicles, and boats, and in the production of matches. In lumber production since 1920,

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8. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, pp. 21-2.

9. Pan American Union, op. cit., p. 24.

10. Stiles, J. A., "Venezuelan Fish Industries Aided by Government Subsidies", p. 432.



mahogany and cedar have gradually taken the lead until, in 1944, these two types formed 80 per cent of the production.<sup>11</sup> The principal centers of lumber production are Puerto Cabello, Valencia, Caracas, and Maracaibo, in each of which there are several sawmills. Substantial quantities of rough sawed, chemically treated yellow-pine lumber are imported by the oil companies. No wood pulp is produced within the country.<sup>12</sup>

Rubber - Substantial numbers of wild rubber trees grow in the regions of the upper Orinoco River and in the Territory of Amazonas, as well as in several areas in the state of Bolivar. Until 1929-30, appreciable quantities of rubber were exported from Venezuela. As production of rubber in the Far East increased in the late 1920's, and as the failure of the first British rubber-restriction plan caused world prices to fall, exports of rubber from Venezuela declined to insignificant figures. Part of the wild rubber produced in Venezuela, however, found an outlet through Brazil; high labor costs and difficulties of transportation narrowly limited the ability of Venezuela to compete in the world rubber market. At present, the exploitation and exportation of rubber are under the direction of the government of Venezuela, which pays a premium of 5.14 cents for

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11. Pan American Union, op. cit., p. 23.

12. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 24.





each kilogram of rubber produced. All sales must be made to the government, and hoarding is prohibited.<sup>13</sup>

Tanning materials and dyewoods - Divi-divi, found in abundance in the dry regions along the coast and to a lesser extent in the llanos, is the most important tanning material produced in Venezuela. In 1947, more than 300 metric tons of divi-divi were shipped abroad; subsequent exports have been somewhat larger.<sup>14</sup> There are also extensive forests of mangrove, especially at the mouth of the Orinoco River and along the northern coast. The bark of the mangrove tree contains about 30 per cent tannin, and its fruit produces a very strong dye. Dyewoods such as fustic, brazilwood, and amarello also are exported.

Tonka beans - Tonka beans are one of the more important of the minor export products of Venezuela. Coumarin, obtained from the seeds of the tonka bean, is used in the manufacture of perfumes, smoking tobacco and cigarettes, and as a substitute for and in combination with vanilla. The type produced in Venezuela is more highly esteemed than the "Para" variety, produced in some other South American countries. The trees can be cultivated, but, because of their irregular production, only wild trees near the Orinoco River are exploited. Workers migrate to the region, gather the fruits,

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13. Ibid. p. 23

14. Ibid.



remove the seeds (called beans), and sell them to merchants or exporters in Ciudad Bolívar, the center of the tonka bean industry. Some of the beans are cured in Ciudad Bolívar with native rum; the rest are sent to Trinidad where they are cured under the supervision of Venezuelan government officials.<sup>15</sup> In 1946, exports of tonka beans from Venezuela were valued at 520,149 bolívares.<sup>16</sup>

Other forest products - Other forest products produced in small quantities include; Chicle, used in the manufacture of chewing gum; barbasco, or cube, used in the preparation of insecticide; cusna, from the bark of which is extracted an ingredient used in making the base of certain bitters; cinchona bark, which yields quinine; zabila (aloes) leaves which produce a juice known as aloe, having medicinal properties; and figue, a vegetable fiber from which bags are manufactured for packaging coffee, cacao, sugar, rice, and cereals. Orchids grow in profusion in the forests as well as under cultivation; both the flowers and plants are exported to the United States.

Marine products - Several zones along the northern coast of Venezuela are suitable for large-scale fishing; these include the Gulf of Caricae, waters north of the Peninsula of Araya; the Lagoons of Tacarigua and Unare, and

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15. Ibid.

16. Stiles, J. A., "Venezuelan Fish Industries Aided by Government Subsidy", p. 432.



the Lake Maracaibo area. Most of the catch, comprising a variety of products, comes from waters adjacent to the state of sucre. In the eastern part of the Gulf of Caricao, in an area not more than 10 miles square, an average of about 10 tons of herring are caught daily for the canneries.<sup>17</sup> The annual commercial catch amounts to about 100 million pounds,<sup>18</sup>

Shark fishing, centered around the Island of Margarita, has been greatly stimulated in recent years by the demand for shark and skins. It is reported that in 1942 an average of about 600 sharks per month were caught by the four operating companies.<sup>19</sup>

Waters surrounding the islands of the Peninsula of Araya are famous for their beds of pearl oysters. These oysters are collected almost entirely for pearls, although the meat is eaten and some shells are exported for the manufacture of buttons and other articles. Margaritan pearls, many of which are odd-shaped, are strong, lustrous, and of good quality. In 1939, because of over-fishing, the oyster beds were almost depleted. In that year the government prohibited pearl fishing in order to allow the beds to redevelop. Fishing was not resumed until the early part of 1943; in that year an excellent return was experienced.

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17. U. S. Tariff Commission, Agricultural, Pastoral, and Forest Industries in Venezuela, p. 24.

18. Stiles, J. A., op. cit., p. 43.

19. U. S. Tariff Commission, op. cit.



The Venezuelan fish-canning industry was established in 1933 with the aid of government loans to the companies. At present, four sea-food canneries, with an estimated total annual capacity of 57 million cans, operate in the state of Sucre and on the Island of Margarita. In 1947, the production of canned fish amounted to 7,476,000 kilos.<sup>20</sup>

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20. Ibid.





## Chapter VIII

### Manufacturing Industries

#### General Characteristics of Manufacturing Industries

Venezuela is in a very early stage of industrialization. Although the country's manufacturing establishments produce a wide range of products, practically all of them are light consumer goods. A great deal of Venezuelan industry is concerned with the first processing of raw material or is an essentially local undertaking; much of the production takes place on a handicraft basis or in small shops employing but few workers and producing for a very limited local market. There are practically no heavy industries in the country. The principal groups of commodities produced in establishments which may rank as factories include processed foods, cotton textiles, chemical and pharmaceutical preparations, and ceramic, leather, tobacco, and wood products. Some paper, metal, and rubber products are also manufactured.<sup>1</sup>

Statistics of manufacturing are inadequate; the latest available ones being those compiled in 1936 at the time of the agricultural-industrial census. The accuracy of these figures is open to question and they should be used principally as an indication of manufacturing capacity rather than

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1. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 22.



as exact statistical data. Through the protection afforded by the tariff and the inability to purchase many articles abroad, the number of industrial plants, their size and value of their output, have increased since 1936. In the aggregate, however, the size of the country's industrial capacity was quite small in 1946.<sup>2</sup>

In 1947 and 1948, with lower priced foreign goods obtainable, the manufacturing industries were forced to lower prices; others sought government assistance. In general, however, a high level of production was maintained.

According to the census figures of 1936, there were 8,025 manufacturing plants in Venezuela (petroleum refining companies not included) with total fixed capital of 24,929,633 bolivares, total sales of 271,169,924 bolivares, and 47,863 employees, including wage earners and salaried individuals. The total number of industries included 4,381 alimentary-products industries, 90 graphic arts industries, 43 stone, clay, and glass industries, 568 leather and leather products industries, 275 tobacco industries, 536 wood-products industries, 146 repair shops, 7 paper industries, 131 iron and steel industries, 74 other metal working industries, 5 rubber industries, and 115 miscellaneous industries (principally electric-power plants and broom

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2. International Reference Service, Marketing Areas in Venezuela, p. 6.



factories).<sup>3</sup>

The small average size of the factories in most of the groups covered by the census of 1936 indicates that a very large proportion of the establishments canvassed in those groups were handicraft shops operated by the proprietor alone or employing but one or two workers. There are, however, some plants of considerable or even large size in the country. For example, although 941 textile establishments were listed in 1936, about one-half of the total production of textiles came from one factory, and a large fraction of the remainder was produced by another mill.

#### Food processing and Beverage Industries

According to the 1936 census, the alimentary products group was by far the most important industry group in the country, accounting for more than one-half of the total number of industrial establishments, about two-fifths of the total industrial investment, more than two-fifths of the total sales value, and more than one-half of the total number of workers employed. In that year, 4,381 food-processing establishments were reported with a total investment of 120 million bolivares (30.6 million dollars), and with 25,647 workers. The total sales value of the industry's products in 1936 was 115 million bolivares (29.3

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3. Compiled by the U. S. Tariff Commission from Anuario Estadístico de Venezuela, 1940.





million dollars). Most of the food-processing establishments are small plants employing few or no workers and producing for a limited local market.

In 1948, sugar was produced in 28 mills last year with an estimated output of 42,800 metric tons.<sup>4</sup> The mills are concentrated principally in the states of Miranda, Lara, Zulia, and the Federal District. The largest, with an estimated annual production of 13,225 short tons, was located at Bobures, state of Zulia.<sup>5</sup> Economically, the equipment now in operation represents a great waste. A systemolization of this industry and the planning of production has been undertaken. The Barquisimeto region and the Luy Valley seem the most adequate for scientific organization of this industry on a profitable scale.<sup>6</sup>

The manufacture of edible fats and the extraction of vegetable oils, which has developed considerably during the past ten years and now occupies a prominent position in this field of production, is at present supplying 80 to 90 per cent of the total consumption needs of the country. The national production of sesame and cotton seeds and peanuts is estimated at 4,000 tons per annum; the extraction capacity of the industry is 14,300 tons.<sup>7</sup>

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4. Stiles, J. A., "Main Venezuelan Industries", p. 644.

5. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 23.

6. Inter-American Development Commission, The Industries of Venezuela, p. 26.

7. Ibid. p. 10.



Of considerable importance to the Venezuelan food supply is government-owned meat-canning plant at San Fernando de Apure. This plant, when operating at capacity, can slaughter about 33,000 head of cattle per year.<sup>8</sup> Located in the center of the cattle-raising district, the factory provides a market for cattle raised in the states of Guarico, Barinac, Portuguesa, and Apure.

Other food-processing and beverage establishments in Venezuela include five breweries with an annual production of 1.4 million gallons of beer, a modern dairy plant at Maracay, and a number of cheese factories. The greater part of the plants in the foodstuffs group consists of small grain mills and bakeries.

#### Textile Industries

The textile industry, the second most important manufacturing industry in Venezuela, is centered principally in Valencia and Caracas. In 1947 there were twenty-seven textile mills, or three times as many as there were in 1938. The output in 1947 was eight times that of the 1938 production.

The production of cotton textiles represents a capital investment by ten of the leading companies of approximately 30,000,000 bolivares. Cotton used by the industry in 1944

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8. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 25.



represented 45 per cent of the manufacturing cost, and 32 per cent of the average selling price. In 1947, the amount of cotton used by Venezuelan mills was 5,751 tons. The industry provided employment for 5,000 workers.<sup>9</sup>

Small silk and rayon weaving knitting mills, principally in and near Caracas, account for most of the remaining textile production. A fiber mill at Barquisimeto produces sisal sacks for coffee, cacao, and sugar, and cloth for cotton bales. This plant operates with raw materials obtained in the surrounding region, the only area in Venezuela where sisal or similar fiber is cultivated.

Textile production in Venezuela consists largely of low-priced cotton fabrics and other products. Some of the weaving mills spin their own yarn and also finish the cloth. The principal products are cotton drills, coarse sheeting, men's suitings, flat duck for hammocks, knitted shirts, underwear, hosiery, blankets, towels and braided wick. Plain dyed goods and goods woven from dyed yarns in stripes or other simple designs are produced in substantial quantities, as are unbleached goods. There is practically no production of printed goods, and that of bleached goods is small. Less than one-third of the country's textile requirements are met by domestic production, the remainder

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9. Inter-American Development Commission, op. cit., p. 6.



is imported.<sup>10</sup>

### Chemical Industries

Except in a few lines, the domestic manufacture of chemicals in Venezuela is small. In 1936, the manufacture of chemicals ranked third among the country's industry groups. Most of the production takes place in the Federal District.

The Venezuelan pharmaceutical and toilet preparation industry, operating largely with imported raw materials, is fairly well established. A relatively large number of establishments, ranging from a few well-equipped plants to small individual enterprises, manufacture the simpler forms of medicinal preparations, particularly tonics and cold remedies, and toilet preparations such as perfumes, eau de cologne, hair tonics, and simple cosmetics. There are numerous small soap factories throughout the country, producing chiefly a rough, blue laundry soap. Other low-priced soaps are produced, however, including perfumed toilet soaps and medicated soaps. The soap industry has for many years supplied the entire domestic needs for laundry soap and 80 per cent of the toilet soap requirements. The output of the 42 existing producers for the year 1946 was 16,011,185 kilograms, with an approximate value of 36,000,000 Bolivares.<sup>11</sup>

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10. Stiles, J. A., "Main Venezuelan Industries", p. 644.

11. Inter-American Development Commission, op. cit., p. 10.





Caustic soda, the only important basic industrial chemical produced in the country, is manufactured at Marguetia, a suburb of La Guaira. The plant supplies about three-fourths of the caustic soda employed in the domestic soap-making industry.<sup>12</sup>

According to the Industrial Census of 1936, there were then 284 chemical enterprises in the country. These represented a total capital investment of 21.8 million bolivares (5.6 million dollars), produced goods valued at 24.8 million bolivares (6.3 million dollars), and employed 1,839 workers.

#### Graphic Arts Industries

According to the census of 1936, the graphic arts industry ranked fourth among the 13 industries for which data were obtained. It then consisted of 90 establishments capitalized at 11.6 million bolivares (3 million dollars) and employing 1,115 workers. The total sales value of its products was 9.8 million bolivares (2.5 million dollars).

It was estimated in 1937 that there were then 30 daily newspapers in the country. The circulation of all newspapers in the country at that time was estimated to be 156,000, including 110,000 in Caracas. In 1937 there were 5 weekly, monthly or fortnightly magazines published in Caracas, 2 in

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12. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 25.



Valencia, and 1 in Maracay. The total magazine circulation was 38,000.<sup>13</sup>

#### Leather and Leather Products Industries

In 1936, the manufacture of leather and leather products reached sixth place among the industry groups in Venezuela. At that time, there were 568 leather and leather-products establishments in the country. These represented a total capital investment of 8.2 million bolívars (2.1 million dollars) and produced goods with a sales value of 19 million bolívars (4.8 million dollars). A total of 4,016 workers were employed.

At present there is a shortage of leather due to the lack of knowledge on the part of owners of livestock of hide conservation. The production at present meets but 35 per cent of the demand for leather for ordinary shoes, and to improve and increase the output the Development Corporation is proceeding with investigations to determine the best means for developing the preparation of fine leathers, the production of quebracho extract, and the acquisition of equipment for the tanneries.<sup>14</sup> Production of shoes for the whole country in 1946 approximated 2,000,000 pairs.<sup>15</sup>

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13. Ibid. p. 27.

14. Inter-American Development Commission, op. cit., p. 13.

15. International Reference Service, Economic Review of Venezuela, p. 7.



### Tobacco Products

Production of leaf tobacco in Venezuela amounts to about 7 million pounds per year, all of which is used domestically in the manufacture of cigars and cigarettes. In 1936, the 275 tobacco manufacturing establishments in the country had a total capital of 7.4 million bolivares (1.9 million dollars), produced goods with a sales value of 28.6 million bolivares (7.3 million dollars), and employed 2,182 workers. Most of the establishments are small; the principal factories are at Caracas, Puerto Cabello, Cumana, Valencia, and Maracay.

### Lumber and Wood Products

In 1940 there were 30 principal sawmills in Venezuela. Most of them were located in Caracas (13), Maracaibo (7), and Valencia (4), but installations also existed at Barquisimeto, Puerto Cabello, Maracay, Carupano, and Ciudad Bolivar. In 1936, there were 536 wood products establishments in the country. Most of them are small carpentry or cabinetmaking shops producing furniture, fixtures, and other light wood products.

### Paper and Paper Products

According to the Industrial Census of 1936, there were then 7 paper and paper products factories in Venezuela. Capitalized at 3.8 million bolivares and producing goods with a sales value of 2.6 million bolivares, these establishments employed a total of 200 workers. Two paper mills were





operating in 1948.<sup>16</sup> One, operating in Maracay, supplied almost the entire domestic requirements of wrapping paper. It also produces bags for cement and small quantities of newsprint, other printing papers, bond paper, and glazed paper; its annual capacity in 1941 was about 6,500 tons. The other paper mill located at El Encantado, near Caracas, has a capacity of from 900 to 1,000 short tons per year.<sup>17</sup>

No wood pulp is manufactured in Venezuela. The two paper mills depend entirely upon imported wood pulp, waste paper, bamboo and rags.

#### Metal Products

The metal-working industries of Venezuela are not highly developed. In 1936, there were in the country 131 iron working establishments, ranging in size from blacksmith shops to small iron works. The size of the establishments may be approximated from the total number of employees which was 375.

Although the metal-working establishments of Venezuela are small, they produce a wide range of light metal articles. A few simple cooking stoves are manufactured. There is a company in Caracas which makes crown corks and tin cans. It produces 36 types of cans and is able to produce 10,000 cans daily.<sup>18</sup> Steel and garden furniture and office, school

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16. Stiles, J. A., op. cit., p. 644.

17. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 29.

18. International Reference Service, op. cit., p. 7.



and clinical equipment is being manufactured in the newly-constructed plant of Fenix C. A., near Caracas, which yearly requires about 5,000 tons of steel.<sup>19</sup>

### Rubber Products

Automobile tires are produced by the General Rubber Factory near Caracas. In 1947, it produced 38,587 tires and 23,804 inner tubes.<sup>20</sup> Inadequate stocks of raw rubber have prevented the plant from operating at capacity, which is approximately 60,000 tires per year. The tire industry is reported to be apprehensive concerning the future because of the enormous increase in tire-producing facilities in the United States and other foreign countries which, it is feared, may flood the Venezuelan market with tires at prices which the local, relatively high-cost, industry cannot compete.

### Power

The government has acquired about one-fifth of the country's potential installed capacity for the public service, and has authorized loans to various companies to increase their production capacity. Two new large plants have been planned this year and technical studies are being made of the hydro-electric resources of the country, with the

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19. Stiles, J. A., op. cit., p. 645.

20. Inter-American Development Commission, op. cit., p. 14.



technical advice of a United States firm. So far, it has been ascertained that potential power resources are very great, and that the establishment of thermo-electric plants will also be possible, due to the abundance of fuel gas and petroleum and a sufficiency of water.<sup>21</sup>

The electric energy production by main companies in 1938 was 11,699 (thousands of kwh), in 10 years the output was 3 times the 1936 figure, the production in 1948 estimated at 323,136 (thousands of kwh).<sup>22</sup>

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21. Stiles, J. A., op. cit., p. 647.

22. Ibid.



## Chapter IX

### Outlook

There is little doubt, that in the past 10 years, Venezuela has witnessed a growth of activity in her industries. Evidence of the development is indicated by the figures on expenditures for Public Administration, which increased from an average of 334,000,000 bolivares during the period 1937-1945 to 1,500,000,000 calculated for the budget of 1947-1948. This enormous increase in actual expenditures is possible because the fiscal income which from 1938 to 1945 averaged 400,000,000 bolivares, exceeded 1,095,000,000 bolivares in 1946-1947. Income from petroleum alone increased from 161,000,000 in 1940 to 814,000,000 in 1947. Other fiscal receipts rose also, from 240,000,000 in 1940 to 417,000,000 bolivares in 1946.<sup>1</sup>

The reasons for the growth are varied. World War II severed Venezuela from the supplies of the outside world. In thousands of bolivares, Venezuela's imports in 193 were 310,949; by 1943 they had fallen to 222,060.<sup>2</sup> To make up for the unattainable goods, Venezuela had to start anew, and also, to increase her own production. The war also made Venezuela the recipient of new orders from foreign nations

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1. Inter-American Development Commission, The Industries of Venezuela, p. 29.

2. Ibid. p. 39.





for materials to be used in the conflict. In thousands of bolivares, Venezuela's exports rose from 693,739 in 1942, to 1,110,821 in 1944.<sup>3</sup> Petroleum and its products was largely responsible for this increase.

Another reason for the growth of industrial activities was an awakening and recognition on the part of the government as to the inadequacies of the Venezuelan economy. The latter was not only recognized but positive actions resulted. The feeling that the oil boom would not last forever, prompted the movement back to agriculture. The vast majority of the 4,000,000 people earn their living from the land. Much of the land was misused and in the long run, the officials believe, unless Venezuela can establish a productive and prosperous agriculture, it is bound to encounter trouble. For instance, 32.6 per cent less maize was produced in 1947 than in 1936.<sup>4</sup> And maize is the largest grain crop. The chief agricultural exports, coffee and cocoa, have been declining for several decades. The livestock industry has been on the downgrade since the end of the last century. The government has tried to come to grips with the agricultural crisis since 1945. The general policy has been to take advantage of the petroleum boom while it lasts, to get as much out of it as possible, and then to reinvest this capital in building up

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3. Ibid. p. 37.

4. "Oil, Agriculture, and Industry in Venezuela," p. 384.



both agriculture and secondary industries. Farmers have been given credit and agricultural communities have been established using modern machinery. The government is carrying out a number of large irrigation projects. The Venezuelan Basic Economy Corporation, of which Mr. Nelson Rockefeller is the head, is carrying on four projects. They include an agricultural development company, a fisheries company, a wholesale business, and a milk production corporation. The corporation has invested in the four projects mentioned on the basis of putting up half the capital for them, and having full common-share stock control for the first ten years. The corporation de Fomento has come in with the other half of the capital, and receives preferred stock with guaranteed return. It is provided that within ten years the Basic Economy Corporation shall offer majority stock control to Venezuelan buyers.<sup>5</sup>

The function of the important corporation de Fomento is to stimulate production through loans, direct investments and any other way that seems feasible. It is becoming an increasingly important weapon in the struggle to diversify and industrialize Venezuela's economy. By law, not less than two, or more than 10 per cent of the national budget every year must go to the Development Corporation, which is charged

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5. Ibid.



with making the country as independent as possible of oil. The appropriation for 1948 was 18,000, 00 dollars, or 5 per cent of the budget.<sup>6</sup> There are sums for loans to rice, citrus fruit, vegetable, corn, potato, cotton, poultry, and sisal growers: to fishermen; to shoemakers; for gold and diamond mining; for brick and cement and lime and plumbing supply industries. Perhaps even more significant, in the long run are the six million boliveres provided for studies into the best ways to develop the production of fertilizers, sugar, oil-bearing plants, feed storage facilities, fishing, textile-making, shoemaking, manufacture of construction material, lumber, electricity, minerals, chemicals, steel, and the provision of highways, railroads, and air communications.<sup>7</sup> Much of the work is still in the planning stage. But the efforts and money which the government has already expended show the recognition and desire of Venezuelan officials to combat her economic unevenness.

Another factor responsible for the new interest in the industrialization of Venezuela is the hospitable treatment accorded to foreign investors. This had made possible the remarkable growth of the petroleum industry in the 1920's and the 30's, this policy has been carried over into the last decade and applied to other enterprises as well. The classic example of excessive government restrictions and

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6. Heath, Burton S., "Sowing the Oil", p. 6.

7. Ibid.





interference with the production of oil in Mexico. There, the foreign oil companies were squeezed out. Reduction of the yearly output of oil in Mexico followed, with resulting decreases in the Mexican government's revenue from oil.

Where the oil industry, between 1916 and 1927, had spent a yearly average of about \$81,000,000 for wages, taxes, and other expenses, it spent in the subsequent decade an average of only \$39,000,000.<sup>8</sup> In Venezuela, as already explained, the government has been far seeing in this respect.

There are frequent changes in the personnel of Latin American governments. Venezuela is not exempt. Her recent history shows that a political party seized control of the government in October, 1945, and was subsequently returned to office as a result of the elections in December, 1947. This party was removed from power last November by the army. An interim government was formed, and it is reported that a general election might soon be held. Though changes may be frequent, Venezuela has been fortunate, since Gomez,<sup>9</sup> in that they have been enlightened administrators all striving for the economic and social betterment of their country. In regard to the present officials in power, J. A. Stiles, Acting Canadian Government Trade Commissioner mentions: "It would

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8. Roosevelt, Nicholas, Venezuela's Place in the Sun, p. 71

9. See Gomez, tyrant of the Andes, by Thomas Rourke.



appear that the same broad economic policy, pursued since October, 1945, will be continued."<sup>10</sup>

I have briefly mentioned some of the bright spots in Venezuela's quest for future economic stability. She has made a start in the program of reducing her dependence on oil. To make further steps in this direction, she will have to overcome certain obstacles. Standard of living and education are serious limitations to expansion. Industries will materialize only through a basic improvement in the people themselves. Literacy, improved standards of living, an increased per capita consumption of needed foodstuffs, better housing, are all correlated with productive capacities. New textile mills, modern food-packing plants, glass-container factories and other industries must sell their products to a domestic market.

Venezuela has trouble in finding foreign markets for her goods (other than oil). Venezuela remained on the gold standard at a time when all the rest of the world went off it, and continues to remain there. As a result, the disparity between Venezuela's prices and those of the rest of the world are great. Hence Venezuela has difficulty in competing in world markets because of the excessively high prices of its products in terms of foreign currency.<sup>11</sup>

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10. Stiles, J. A., "Petroleum Basis for Prosperity", p. 182.

11. Harris, Seymour, Economic Problems of Latin America, chapter 9.



Higher prices are a result also of obsolete methods of production. The majority of existing plants are poorly equipped.<sup>12</sup> They lack modern, low cost methods of production and distribution. Despite some progress in recent years, agricultural techniques on the whole are not advanced, crop yields are low, and costs of production are high. Except in a few instances, production is on a small scale. Much of Venezuela's present industrial development has taken place behind very high tariff barriers. There is a shortage of skilled labor in rural areas for the efficient development of domestic raw materials. All the latter conditions contribute to high costs. Future competition with foreign sources of supply will require modernization and the acquisition of necessary skills.

Another deterrent which does not support any rapid development of industries is the lack of an adequate transportation system. This has been fully recognized in Venezuela and efforts are being expended to alleviate this condition. The National Highway Commission has prepared a detailed study of Venezuela's essential needs for road and highway construction in the next ten years. The plan, completed in 1947, was published in 1948. The preliminary plan provided for the construction of roads principally in the areas of the

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12. Hughlett, L. J., Industrialization of Latin America, p. 48.





north of the Orinoco and Apure Rivers. The program provided for the construction of 6,713 kilometers of highways, including road improvement, at an estimated total cost of 353,614,000 bolivares.<sup>13</sup> The government has inaugurated projects for the construction of several new airports, the paving of existing runways, and repairs and improvements to all those under its control.

A further obstacle to industrial development in Venezuela is the lack of enthusiasm on the part of wealthy Venezuelans to invest their capital in new or existing enterprises. In the latter half of 1935, the combined bank savings of the Venezuelan big landowners and businessmen amounted to approximately 320,000,000 bolivares, more than three times the amount of government reserves at the time.<sup>14</sup> The landowners preferred to keep their money banked rather than to reinvest it in the exploitation of their idle lands or in the modernization of existing farm plants. This stagnating capital serves to inhibit the healthy development of the Venezuelan economy.

The future prospects of certain Venezuelan industries seem promising. In the field of agriculture, coffee, and cacao show prospects of becoming revitalized. Venezuelan coffee is of the mild type and of a quality much desired in

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13. Stiles, J. A., "Transportation Facilities in Venezuela", p. 781.

14. Soule, Effron, and Ness, Latin America in the Future World, p. 82.





world markets. Venezuelan cacao is high in quality and flavor and commands premium prices. In 1940, Venezuelan cacao commanded a price more than twice that of African and Brazilian varieties.<sup>15</sup> With the attention which is now being given these two commodities, in regard to more efficient production methods, combined with the return of the European market, Venezuela's efforts for diversification may show heartening progress.

The best prospects in the future for Venezuelan mineral industries go to petroleum, gold and iron. Known reserves of petroleum will sustain present production for at least twenty years more.<sup>16</sup> Of course, there is also the possibility that there is a good deal more oil than is at present known.

Venezuela's proved gold producing areas are now more extensive than ever.<sup>17</sup> It is probable that the country's output of gold will reach new levels, provided that there is a strong world demand for gold.

Vast reserves of iron ore are to be found in Venezuela. At present it is in its first stages of exploitation. Holding back more extensive operations at present is the lack of coal needed in its production. Research is now being conducted to determine the feasibility of using gas and petroleum derivatives in place of coal. The Bethlehem Steel

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15. U. S. Tariff Commission, Recent Developments in the Foreign Trade of Venezuela, p. 76.

16. "Oil, Agriculture, and Industry in Venezuela", p. 384.

17. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 20.



Corporation and the United States Steel Corporation (through the Oliver Mining Company), have concessions at present. When both projects are in operation (1951 or 1952), shipments of high-grade iron ore from Venezuela to the United States may approximate 6,000,000 tons annually.<sup>18</sup>

Manufacturing industries, because of the restricted market, must for some time to come be limited almost entirely to the production of light consumer goods, principally those having a wide distribution within the country. The demand for heavy products, either for direct consumption or for use in further production, is inadequate to justify the expenditures necessary to erect and operate efficient manufacturing plants.<sup>19</sup> Items which seem to have better than average prospects for success, include the following: hardware, flat glass and other glassware, agricultural and other tools, chemicals, paints, inks, cotton textiles, paper, and paper goods.<sup>20</sup>

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18. Wythe, G., "Latin America's Vast Resources Spur Broadening Developments", p. 5.

19. U. S. Tariff Commission, Mining and Manufacturing Industries in Venezuela, p. 31.

20. Kimber, Albert W., Latin American Industrialization, p. 54.









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## ABSTRACT

The United States of Venezuela occupies part of the northernmost part of the South American Continent. The country has an approximate area of 352,143 square miles. The estimate of the population for 1943 was 4,004,719. Areas of greatest population density are the Andean and coastal highlands.

Petroleum is the most important commodity produced in Venezuela and its effect upon the general economy of the country is tremendous. For example, 95.15 per cent of all foreign exchange brought into the country in 1947 came from oil. The oil companies provided about 63 per cent of the total revenue taken in by the Venezuelan government. Petroleum is primarily the cause of the national government's virtual freedom from internal or external debt and the fact that the Central Bank has gold and exchange reserves more than equivalent to the amount of paper money in circulation. All Venezuelan oil production and most exploration is divided among thirteen companies representing United States, British, and Dutch capital. However, 94 per cent of the production is operated by three large interests having the following percentages of the total - Creole (subsidiary of Standard Oil of New Jersey) 45; the Royal Dutch-Shell group of three companies, 32; and the Gulf-operated Mene Grande Oil Company, 17.



The oil companies employ between 40,000 and 45,000 workers and pay the highest wages in the country.

In 1948, 37 per cent of Venezuelan oil went to North America, 34 per cent to Europe and Africa, 24 per cent to South America, and 5 per cent to Central America.

The petroleum industry has had its tremendous sweep to the leading position in Venezuelan economy within a period of twenty-five years, and indications point to even further expansion.

Next to petroleum, gold is the most important mineral found in Venezuela. The metal ranks as the country's third most important export product, being exceeded only by petroleum and coffee.

Venezuela is an important source of diamonds, principally those of the industrial variety. Diamond production in 1948 amounted to 75,513 carats.

Venezuela possesses important reserves of iron ore, but as yet they have not been developed on a commercial scale. According to studies made by geologists, the reserves of this mineral in Venezuela exceed a billion tons, which with those of Brazil are sufficient in amount to meet the demands of American industries for many generations. The ores have the highest mineral content of the world and it is expected that an average of 66 per cent will be reached.

Other minerals produced include vanadium, asbestos, magnesite, cement, and salt. Other minerals occurring, but



not developed on a commercial scale are nickel, copper, tin, cinnibar, mica, rock crystal, and asphalt.

The prominence of petroleum and its products in the foreign trade of Venezuela has tended to obscure the importance of agricultural industries in the national economy. Three-fourths of her people work in agriculture, forestry and fishing. Farm and livestock industries together accounted, before the war, for more than two-fifths of the total national wealth. Coffee and cacao are the principal export products. Products grown chiefly for domestic consumption, and in quantities generally insufficient to meet domestic requirements, are sugar, corn, yuca, yams, beans, peas, onions, garlic, and tobacco, as well as a wide variety of indigenous fruits including bananas, mangoes, and coconuts. Domestic production of cotton supplies part of the country's requirements.

Although Venezuela has large areas of tillable land, it depends on foreign sources for a large part of its foodstuffs. In general, agricultural techniques are not advanced; yields are low, and costs of production are high. Transportation facilities in the interior are extremely inadequate, and lack of storage and distribution facilities has tended to limit output.

Cattle raising is of particular importance in supplying meat and dairy products for domestic consumption, as





well as live animals and hides for export. Until the last six years, livestock owners managed their holdings in a very primitive manner. No attention was given to the selection of cattle, location of pastures, providing clean water or to transportation and other phases vital to the betterment of the industry. Now the efforts of the ranchers are being directed toward a complete renovation of the industry under the supervision of the Ministry of Agriculture and Animal Husbandry and the Agriculture and Livestock Credit Bank.

Venezuela is in a very early stage of industrialization. Although the country's manufacturing establishments produce a wide range of products, practically all of them are light consumer goods. A great deal of Venezuelan industry is concerned with the first processing of raw material or is an essentially local undertaking; much of the production takes place on a handicraft basis or in small shops employing but few workers and producing for a very limited local market. There are practically no heavy industries in the country. The principal groups of commodities produced in establishments which may rank as factories include processed foods, cotton textiles, chemical and pharmaceutical preparations, and ceramic, leather, tobacco, and wood products. Some paper, metal, and rubber products are also manufactured.

Venezuela has made a start in the program of reducing her dependence on oil. To make further steps in this



direction, she will have to overcome certain obstacles. Standard of living and education are serious limitations to expansion. Industries will materialize only through a basic improvement in the people themselves. Literacy, improved standards of living, an increased per capita consumption of needed foodstuffs, better housing, are all correlated with productive capacities. Modern methods of production will have to be incorporated. The majority of existing plants are poorly equipped. They lack modern, low cost methods of production and distribution. Despite some progress in recent years, agricultural techniques on the whole are not advanced, crop yields are low, and costs of production are high.

The future prospects of certain Venezuelan industries seem promising. In the field of agriculture, coffee and cacao show prospects of becoming revitalized. Best prospects in the mineral industries go to petroleum, gold, and iron. Manufacturing industries, because of the restricted market, must for some time to come be limited almost entirely to the production of light consumer goods, principally those having a wide distribution within the country.







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